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SARA (Superfund Amendments and Reauthorization Act) Section 313 Roadmaps Data Base. User's Manual. Version 2.10

ICF, Inc., Fairfax, VA

Prepared for:

Environmental Protection Agency, Washington, DC

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EPA has developed a database of sources of information on the chemicals listed in section 313 of the Superfund Amendments and Reauthorization Act (SARA). This database is intended to assist users of section 313 Toxic Release Inventory data to perform exposure and risk assessments of these chemicals. The Roadmaps system displays and/or prints information for the SARA section 313 chemicals on health and environmental effects, Federal regulations, and state air and water regulations, monitoring data, and state contacts.

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SARA SECTION 313 ROADMAPS DATABASE USER'S MANUAL

1.0 Introduction

EPA has developed a data base of sources of information on the chemicals listed in Section 313 of the Superfund Amendments and Reauthorization Act (SARA). This data base is intended to assist users of the Section 313 Toxic Release Inventory (TRI) data to perform assessments of these chemicals.

The Roadmaps system displays and/or prints out information for the SARA Section 313 chemicals on health and environmental effects, carcinogenicity and other properties, federal regulations, and state air and water regulations and monitoring data. It also includes lists of state contacts.

1.1 Purpose of Document

This document describes the design of the SARA Section 313 Roadmaps Data Base microcomputer program, and provides instructions for using the system.

1.2 Overview of Roadmaps Database System

The SARA Section 313 Roadmaps Database Program is available on two floppy diskettes which must be loaded onto a hard disk before use. See section 1.8 of this manual for instructions on how to install the Roadmaps system on your computer.

1.3 Data Structures

Roadmaps (version 2.10) requires a number of dBASE III[1] database files. The primary data files, SARA313.DBF, WATER313.DBF, and AIR313.DBF, contain chemical specific information for each of the Section 313 chemicals. These primary files are linked to the following files:

- Carcinogenicity file (CHR2CODE.DBF), which contains information on the carcinogenicity codes used in SARA313.DBF
- Health effects file (HEALTHEF.DBF), which describes the health and environmental effects listed in SARA313.DBF
- Federal Regulations file (FEDSTAT.DBF), which describes the federal regulations applicable to each chemical in SARA313.DBF
- Information sources file (ISOURCE.DBF), which describes the information sources referenced in the SARA313.DBF
- Water information sources file (WATSORCE.DBF), which describes the information sources referenced in the WATER313.DBF

---

[1] dBASE III is trademarked by Ashton-Tate, Inc.

- Air information sources file (AIRCODE.DBF), which describes the information sources referenced in the AIR313.DBF

- Sources file (SORCE313.DBF), which contains the field names and the locations of the descriptions pertaining to each field name in the various information source database files.

- Synonyms file (SYN313.DBF), which contains 4894 synonyms for the chemicals in SARA313.DBF.

- Contacts files (CONTACTS.DBF, CONTACTW.DBF, CON313.DBF), which contain lists of contacts for information from states on air, water, and section 313.

Appendix A shows the structure of the database files in the Roadmaps system.

1.4 Hardware/Software Requirements

The Roadmaps system is designed to run on an IBM personal computer (or compatible computer) with a minimum of 512K RAM memory, a hard disk drive, and at least one floppy disk drive. Roadmaps requires the following software package on the personal computer:

DOS: version 2.1 or greater

dBASE III is not required to run the Roadmaps system, because the dBASE III code has been compiled with the Clipper[2] compiler.

1.5 Description of the Roadmaps System Files on Floppy Diskettes.

The Roadmaps system is stored in a compressed format on two 5.25" 2S/2D (360 KB) diskettes. The contents of these two disks are listed below.

Disk 1:	PKXARC	COM	11482	9-13-87
	INSTALL	BAT	899	7-14-89
	ROADMAP1	ARC	307529	7-14-89
Disk 2:	ROADMAP2	ARC	257250	7-14-89

During the installation process for Roadmaps (explained in Section 1.8) program and data base files will be extracted, or "unarchived," from the compressed format files. The following files will be extracted:

---

[2] Clipper is trademarked by the Nantucket Corporation

File Name		Size
AIR313	DBF	54368
AIRCODE	DBF	8704
CHR2CODE	DBF	1758
CON313	DBF	17158
CONTACTS	DBF	18818
CONTACTW	DBF	15498
FEDSTAT	DBF	5120
HEALTHEF	DBF	5957
HELP	DBF	1263
ISOURCE	DBF	9241
PRINTER	DBF	1602
ROADMAPL	DBF	1519
ROADMDBF	DBF	2048
SARA313	DBF	113451
SARACODE	DBF	3590
SORCE313	DBF	6058
STATE	DBF	1386
STATEINF	DBF	380
SYN313	DBF	1169796
WATER313	DBF	57010
WATSORCE	DBF	7384
HELP	DBT	14001
REFCNT	EXE	160204
ROADMAPS	EXE	274020

In addition, a total of 44 ASCII format files will be unarchived (these files have no extensions). These files contain expanded descriptions of the general information sources.

1.6 Creation of Index and Temporary Database Files

The Roadmaps system will create the following indexes:

File Name		Size
AIR313	NTX	8192
AIRCODE	NTX	4096
CHR2CODE	NTX	2048
CON313	NTX	4096
CONTACTS	NTX	4096
CONTACTW	NTX	4096
FEDSTAT	NTX	2048
HEALTHEF	NTX	2048
ISOURCE	NTX	2048
SORCE313	NTX	7168
SYN313C	NTX	260096
WATER313	NTX	8192
WATSORCE	NTX	4096
HELP	NTX	2048
SARA313C	NTX	8192

File Name	Size
SARA313N NTX	24576
SYN313N NTX	215040
SARA313I NTX	12288

1.7 Disk Space Needed to Run the Roadmaps System

To run the Roadmaps system, a PC is needed with a hard disk with at least 3,000,000 bytes (3 megabytes) of available disk space.

1.8 Copying the Roadmaps System to the Hard Disk

To copy the system to your hard disk, type the following commands at the DOS prompt:

1). C:> **MKDIR C:\ROADMAPS** (makes a directory on the hard disk)
If the message: C:> **Unable to create directory** appears, chances are the C:\ROADMAPS directory already exists on the hard disk, and you can proceed to the next step.

2). C:> **CHDIR \ROADMAPS** (changes the directory to \ROADMAPS)

3). Insert diskette 1 in the A: drive and copy files to the hard disk

C:\ROADMAPS> COPY A:*.* (copies all files from the A: drive)

4). Repeat step 3 with diskette 2.

5). Type "INSTALL" at the dos prompt and follow the on-screen directions to unarchive the system files.

C:\ROADMAPS>INSTALL

1.9 Configuring Your Computer for the Roadmaps System

Before running the Roadmaps system for the first time, you must be sure that your computer is configured correctly. You will need to edit your computer's CONFIG.SYS file or create a new one. Proceed as follows:

1. First you must confirm that there is not already a CONFIG.SYS file on the computer's hard disk. You do not want to overwrite an old CONFIG.SYS file, because it may contain information that is necessary for running other programs. To look for this file, type at the DOS prompt:

C:> DIR c:\CONFIG.SYS (list all files named CONFIG.SYS)

If the message "File not found" appears, proceed to step 2. If a message similar to:

CONFIG SYS 215 12-17-87 10:07 a

appears, then you know there is already a CONFIG.SYS file, and it should be edited rather than copied over; proceed to step 3.

2. If no CONFIG.SYS file exists, you must create one. To do this you can use any ASCII text editor or the EDLIN command from DOS (explained in your DOS manual). The new CONFIG.SYS file must be created on the root directory of the hard disk (i.e., the C:\directory) and should consist of the following two lines:

```
files=50
buffers=22
```

Once this is complete, skip to step 4.

3. If a CONFIG.SYS file exists, you can edit it using any ASCII text editor or the EDLIN command from DOS (explained in your DOS manual). You must edit this file so that the following lines of code are included:

```
files=50
buffers=22
```

This may require inserting the above lines in the file or simply changing the numbers in the existing lines to "50" and "22". Proceed to step 4.

4. Once you have created or edited the file, reboot the system, either by shutting the computer off and then on again or by simultaneously holding down the CTRL, ALT, and DEL keys. You must reboot or the system will not incorporate the new commands. After rebooting you can run the Roadmaps system successfully.

1.10 Starting the Roadmaps System for the First Time

After you have configured your machine and the system has been loaded on the hard disk, Roadmaps can be run by entering:

```
C:\>  CD \ROADMAPS                    (change directory)

C:\ROADMAPS>  ROADMAPS
```

The first time the system is started, it will automatically create the needed index files. It will take some time for the system to create the index files for the SYN313.DBF. If this message appears at the top of the screen during startup:

proc:FILECHK line: 207 System error disk full Continue?

then there is not enough disk space available to create the required index files. In response to this message the user should hit "N" to Quit. The user must clear some disk space and restart Roadmaps by typing ROADMAPS at the DOS prompt.

2.0 Running the Roadmaps System

Each time you wish to start the Roadmaps system you must enter the following commands at the DOS prompt:

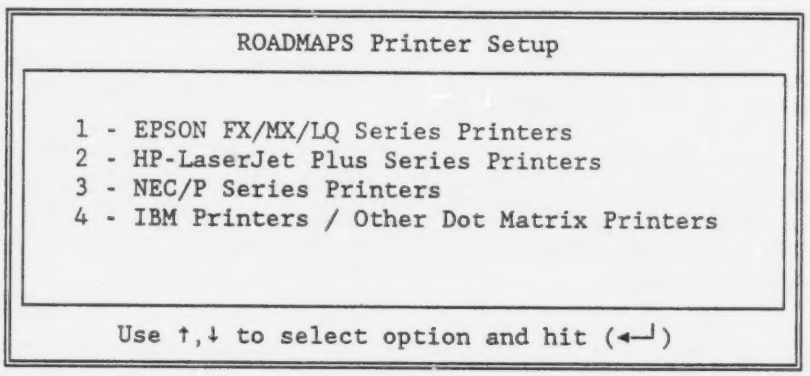
C:\ **CD\ROADMAPS** (change directory)

C:\ROADMAPS> **ROADMAPS**

The Roadmaps system displays an introductory screen which informs the user of the version and date of the system. This screen will be displayed until the user presses a key. A second screen that briefly describes the system can be called up by pressing the <F1> key.

The system verifies that all needed files are on the hard disk and displays the first screen of the printer setup menu (Exhibit 2.1), shown below.

Exhibit 2.1

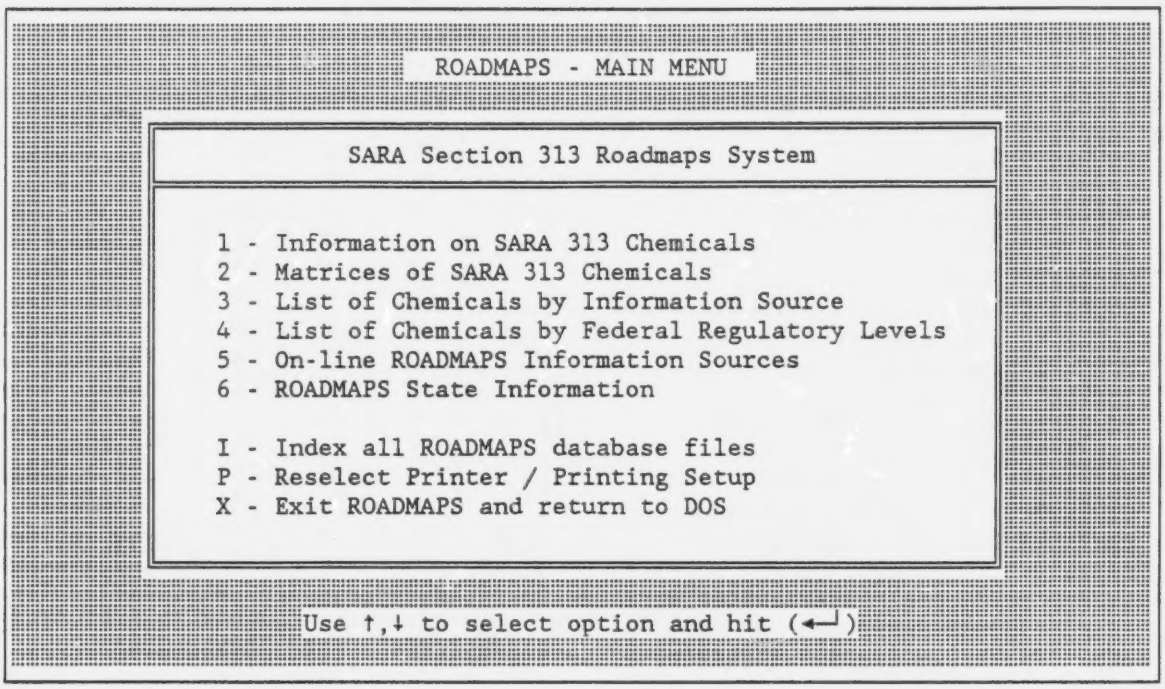

ROADMAPS Printer Setup
1 - EPSON FX/MX/LQ Series Printers
2 - HP-LaserJet Plus Series Printers
3 - NEC/P Series Printers
4 - IBM Printers / Other Dot Matrix Printers
Use ↑,↓ to select option and hit (↵)

All menu screens in the Roadmaps system operate on the same principle. To select an option, the user can: (1) Press the key for the number or letter from the left side of the menu corresponding to the selection; or (2) Move the cursor vertically (use the ↑ and ↓ keys) to highlight the selection and press enter.

Select the printer that is most like the printer you will be using with Roadmaps. If you will be using a daisy wheel printer or a printer that is substantially different from those listed in the menu, you should select option 1 and direct your printer output to a file, which you can then print using the DOS "PRINT" command (see your DOS manual for further instructions).

After selecting a printer, the system will ask you to select portrait or landscape orientation for your printing (portrait is normal, 8½ x 11 orientation, landscape is sideways, 11 x 8½ orientation). The system will then ask for the number of lines per page. A recommended value is given, but it may be changed. The last printer setup screen asks the user to verify the printer parameters. If you verify by pressing the return key at this screen, the system moves to the Roadmaps Main Menu (Exhibit 2.2), shown below:

Exhibit 2.2


ROADMAPS - MAIN MENU
SARA Section 313 Roadmaps System
1 - Information on SARA 313 Chemicals
2 - Matrices of SARA 313 Chemicals
3 - List of Chemicals by Information Source
4 - List of Chemicals by Federal Regulatory Levels
5 - On-line ROADMAPS Information Sources
6 - ROADMAPS State Information
I - Index all ROADMAPS database files
P - Reselect Printer / Printing Setup
X - Exit ROADMAPS and return to DOS
Use ↑,↓ to select option and hit (↵)

The main menu options are explained below. Note that Roadmaps also allows you to change your printer setup from the main menu (see Section 2.8).

2.1 Information on SARA 313 Chemicals

Option 1 from the main menu allows the user to search for and access data on a chemical-specific basis. The menu shown in Exhibit 2.3 appears when the user selects option 1. The menu lists each Section 313 chemical and the number of reference sources available in each category by chemical.

Exhibit 2.3

Number of Reference Sources Available

CAS Number	Chemical Name	Carc	Hlth Eff.	Fed. Reg.	Gen. Info	Water	Air
50-00-0	Formaldehyde	4	6	14	26	8	45
51-28-5	2,4-Dinitrophenol	0	6	10	16	2	0
51-75-2	Nitrogen mustard	3	4	4	12	0	2
51-79-6	Urethane (Ethyl carbamate) (mo	4	1	4	13	0	3
52-68-6	Trichlorfon	0	7	4	16	0	0
53-96-3	2-Acetylaminofluorene	3	0	5	12	0	2
55-18-5	N-Nitrosodiethylamine	4	4	6	16	0	0
55-21-0	Benzamide	0	0	1	4	0	0
55-63-0	Nitroglycerin	0	2	6	11	0	7
56-23-5	Carbon tetrachloride	4	6	21	30	50	30
56-38-2	Parathion	0	6	12	24	53	8
57-12-5	Cyanide compounds	0	6	7	16	53	3
57-14-7	1,1-Dimethyl hydrazine	4	4	10	18	0	9
57-57-8	beta-Propiolactone	3	2	4	13	0	7
57-74-9	Chlordane	3	7	19	31	61	13

↑: Up →:Column right F2:Synonyms ←┘:Sources F5: Search Menu
↓: Down ←:Column left ESC: Exit

2.1.1 Searching on Chemical Name, CAS Number, or Synonym

Pressing the <F5> key allows the user to search the menu for a specific Section 313 chemical. The Database Search Menu, shown below in Exhibit 2.4, displays the search options.

Exhibit 2.4

Number of Reference Sources Available

CAS Number	Chemical Name	Carc	Hlth Eff.	Fed. Reg.	Gen. Info	Water	Air
50-00-0	Formald			4	26	8	45
51-28-5	2,4-Din			0	16	2	0
51-75-2	Nitroge			4	12	0	2
51-79-6	Urethan			4	13	0	3
52-68-6	Trichlo			4	16	0	0
53-96-3	2-Acety			5	12	0	2
55-18-5	N-Nitro			6	16	0	0
55-21-0	Benzami			1	4	0	0
55-63-0	Nitrogl			6	11	0	7
56-23-5	Carbon			1	30	50	30
56-38-2	Parathi			2	24	53	8
57-12-5	Cyanide			7	16	53	3
57-14-7	1,1-Dim			0	18	0	9
57-57-8	beta-Propiolactone	3	2	4	13	0	7
57-74-9	Chlordane	3	7	19	31	61	13

"F5" - Database Search Menu

1 - Go to CAS Number
2 - Go to Regulated Chemical Name
3 - Go to Chemical Synonym
4 - Skip (minus/plus)

X - Exit Search Menu

↑,↓ (↵) to select

↑: Up →:Column right F2:Synonyms ↵:Sources F5: Search Menu
↓: Down ←:Column left ESC: Exit

The first search option allows the user to find a chemical by its Chemical Abstract Service (CAS) Registry number. After selecting this option, a highlighted window will appear with a blinking cursor for the user to enter a CAS number (enter only the numerical digits, without dashes) and press the return key. The system will search the menu for the CAS number and, if it corresponds to a Section 313 chemical, will move to that chemical in the menu.

The second and third search options work in a similar way, but allow the user to search based on either the Regulated Chemical Name or a Chemical Synonym name. The user may also enter a portion of a name for these options, for example, the first three letters, to display a list of chemicals or synonyms that begin with that sequence of letters. (Note: for the synonym search option, the user should omit numbers, dashes, blanks, and chemical prefixes when entering a synonym. However, the system will recognize these special characters in the regulated chemical name search option.)

The fourth option allows the user to skip forward or backwards in the menu by any number of lines. When the user selects this option, the system will ask for the number of lines to skip (negative numbers cause the system to skip backwards).

2.1.2 Displaying and Printing Lists of Synonyms

Once the user has moved the cursor to highlight a chemical, he/she can press the <F2> key to obtain a list of synonyms for that chemical. An example of the displayed list is shown below, in Exhibit 2.5.

Exhibit 2.5

Synonyms List for Selected Chemical

Number of Synonyms: 20

Regulatory Name: Formaldehyde

1. BFV
2. Fannoform
3. Formaldehyde*
4. Formaldehyde, gas

↑: Up one Source PgDn:Next page
↓: Down one Source PgUp:Previous Page F4:Print ESC: Exit

To print the list, the user can press the <F4> key and then choose to direct the print output to the printer or to a file, with the option of naming the file with the default SYN.PRN or entering another name.

2.1.3 Displaying and Printing Chemical-Specific Reference Information

Chemical-specific information on available reference sources can be displayed or printed using the menu shown in Exhibit 2.3. After the user has selected a chemical by moving the cursor to highlight the chemical name, he/she can move the cursor horizontally to highlight a particular category of information and then press the return key to view the list of sources. The database has information in the following six categories: "Carc" for carcinogenicity classifications; "Hlth Eff" for human health and environmental effects; "Fed Reg" for applicable federal regulations; "Gen Info" for general information references for documents and on-line databases; "Water" for state water regulations and monitoring information; and "Air" for state air information and references. A sample screen for general information is shown below in Exhibit 2.6.

Exhibit 2.6

General Information

Update: 07/14/89

Formaldehyde

Number of Sources: 25

CAS Number: 50-00-0

1. Health and Environmental Effects Profiles (HEEP); Summaries of health hazard literature for OSW use in RCRA Sec 3001; Office of Health & Environmental Assessment (Health, Environmental, Safety, Regulatory)

2. Chemical Emergency Preparedness Program (CEPP), Interim Guidance, EPA Chemical Profiles, 1985 (under revision) (Health, Safety, Occupational, Regulatory)

3. Hazardous Substances Databank, National Library of Medicine TOXNET (on-line data base) (Health, Environmental, Safety, Occupational, Regulatory) HSDB Reference Number: 0164

4. Chemical Hazard Information Profiles (CHIP), used for TSCA chemical assessment, 20-40 page narrative reports on health and env. effects; TSCA Assistance Office (Health, Environmental, Regulatory)

↑: Up one Source	PgDn:Next page	F1:Help	←┘:Expanded Desc.
↓: Down one Source	PgUp:Previous Page	F4:Print	ESC: Exit

To print a list of sources the user should press the <F4> key from the display screen, and then direct the output to the printer or to a file.

The sources referenced in Roadmaps may contain several types of information. Exhibit 2.7 contains a listing of the types of information included in references, as indicated at the end of the description of the reference by parenthetical entries.

2.1.4 Accessing Expanded Descriptions of General Information Sources

The database also contains expanded descriptions of the information sources listed under the General Information category, including sources used for information in the other five categories. These can be accessed for any particular chemical by calling up the list of sources under the general information category, moving the cursor vertically to highlight the desired source, and then pressing the return key. A sample of the first screen of an expanded description for a HEEP document is shown below, in Exhibit 2.8.

Exhibit 2.7

Types of Information Included in References

The parenthetical entries following the references indicate the information sources may contain one or more of the types of information listed below under each code.

Health

- Biological Properties
- Chemical Identity
- Chemical and Physical Properties
- Health, Toxicological and Biological Effects Data (broad coverage)
- Human Exposure Levels
- Acute and Chronic Toxicity
- Aquatic Toxicological Data
- Carcinogenicity
- Mechanisms of Toxicity (includes absorption and metabolism)
- Mutagenicity/Genotoxicity
- Oral, Inhalation and Dermal Toxicological Data
- Pharmacology/Pharmacokinetics
- Teratogenicity/Reproductive Effects

Environmental

- Environmental Concentration, Exposure Levels, and Other Exposure-Related Data
- Environmental Effects Data (broad coverage)
- Environmental Fate, Transport and Distribution (includes Environmental Transfer Rates such as biodegradation, bioaccumulation)

Safety

- Emergency First Aid Treatment Guidance
- Fire and Explosion Hazard Data
- Protective Equipment Information
- Risk Assessment/Risk Management Information
- Safety and Handling Information

Occupational

- Monitoring, Analysis, and Dispersion Modeling Information
- Market Information
- Research and Methods Development Information
- Use and Production Information/Workplace Practice

Regulatory

- Existing Regulations, Standards and Recommendations

Exhibit 2.8

Source: HEEPS Expanded Description

Health and Environmental Effects Profiles (HEEP)

Title: Health and Environmental Effects Profile

Publisher: Environmental Criteria and Assessment Office (ECAO), U.S. Environmental Protection Agency

Time of Publication: Various publication dates

Type of Publication: Chemical profiles which aid the Office of Solid Waste developing waste characterization regulations under Section 3001 of the Resource Conservation and Recovery Act (RCRA).

- Source of Data/Information: Searches of computerized databases (including Chemical Abstracts, TOXLINE, RTECS, OHM-TADS, STORET, SANSS, AQUIRE, TSCAPP, and SRC Environmental Fate), available literature, and abstracts from readily available sources (e.g. IARC Monographs).

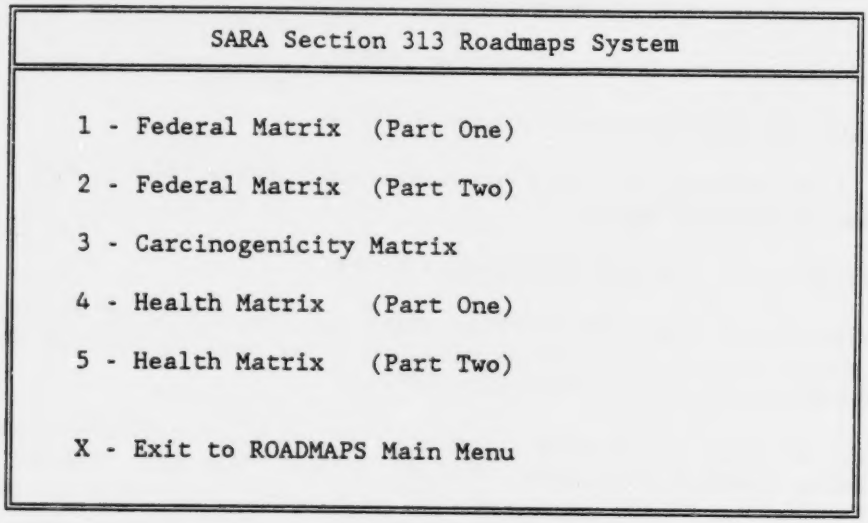
↑: Up one line PgDn:Next page
↓: Down one line PgUp:Previous Page F4:Print ESC: Exit

2.2 Federal Matrices of SARA 313 Chemicals

Option 2 on the main menu allows the user to view or print matrices of information contained in Roadmaps. A total of five matrices can be generated by the system. They can be accessed by choosing option 2 from the main menu and then selecting from the menu shown below in Exhibit 2.9.

Exhibit 2.9

Matrices of SARA 313 Chemicals


SARA Section 313 Roadmaps System
1 - Federal Matrix (Part One)
2 - Federal Matrix (Part Two)
3 - Carcinogenicity Matrix
4 - Health Matrix (Part One)
5 - Health Matrix (Part Two)
X - Exit to ROADMAPS Main Menu

Use ↑,↓ to select option and hit (↵)

2.2.1 Federal Matrices

The two federal matrices (parts one and two) contain information on the federal regulations which apply as well as selected regulatory standards listed by CAS number, without the chemical name. Selecting option 1 or 2 on the menu in Exhibit 2.9 allows the user to view or print the matrix. When viewing, the user may scroll forward through the matrix by pressing any key. Descriptive notes follow the matrix, and can be accessed during viewing by pressing the <F1> key. The user may exit from viewing the matrix by pressing the <ESC> key. Exhibit 2.10 shows one page of the federal matrix (part one).

Exhibit 2.10

Federal Regulatory Levels, Standards, and Recommendations - Part 1
(See notes following table)

CAS	CERCLA RQ (pounds)	SARA TPQ (pounds)	OSHA PEL (8-hour TWA)	ACGIH TLV (8-hour TWA)
50000	1000	500	1.000 ppm	1.000 ppm
51285	10			
51752		10*		
51796	1#			
52686	100			
53963	1#			
55185	1#			
55210				
55630	10			0.050 ppm
56235	5000		2.000 ppm	5.000 ppm
56382	1#	100	0.100 mg/m3	0.100 mg/m3
57125	10		5.000 mg/m3	5.000 mg/m3

Press [↵]: Continue Matrix [F1]: NOTES [Esc]: Exit

2.2.2 Carcinogenicity Matrix

The carcinogenicity matrix can be viewed or printed by selecting option 3. This matrix contains the list of chemical names, CAS numbers, and carcinogenicity classifications for section 313 chemicals. Explanatory notes are included at the end of the matrix, or can be accessed by pressing the <F1> key during viewing. Exhibit 2.11 shows one page of the carcinogenicity matrix.

Exhibit 2.11

Carcinogenicity Matrix (See notes following table)

CAS	Chemical Name	NTP Test	NTP Class	IARC Rating	EPA Rating	GENETOX Rating
50000	Formaldehyde		CS	2A	B1	SP
51285	2,4-Dinitrophenol					
51752	Nitrogen mustard		CS	2A		SP
51796	Urethane (Ethyl carb		CS	2B	B2	SP
52686	Trichlorfon					
53963	2-Acetylaminofluoren		CS		B2	SP
55185	N-Nitrosodiethylamin		CS	2A	B2	SP
55210	Benzamide					
55630	Nitroglycerin					
56235	Carbon tetrachloride		CS	2B	B2	SP
56382	Parathion					
57125	Cyanide compounds					

This matrix is not connected with any EPA regulation. Entries indicate availability of information based on a literature review; blank entries indicate only that no information was found in the scope of the review.

Press [←┘]: Continue Matrix [F1]: NOTES [Esc]: Exit

2.2.3 Health Matrices

The health matrices can be viewed or printed by selecting option 4 or 5. This matrix contains the list of chemical names, CAS numbers, and reference codes for health and environmental effects. Explanatory notes are at the end of the matrix, and can be viewed by pressing the <F1> key. Exhibit 2.12 shows one page of the health matrix (part one).

Exhibit 2.12

Health and Environmental Effects - Part 1 (See notes following table)

CAS	Chemical Name	Herit. Muta.	Devel. Toxic.	Repro. Toxic.	Acute Toxic.	Chronic Toxicity
50000	Formaldehyde	GENE		HEEP	HEEP	HEEP
51285	2,4-Dinitrophenol		HSDB	HSDB	RTEC	HSDB
51752	Nitrogen mustard	GENE	HSDB	HSDB	RTEC	
51796	Urethane (Ethyl carb	GENE				
52686	Trichlorfon		HSDB	HSDB	RTEC	HSDB
53963	2-Acetylaminofluoren					
55185	N-Nitrosodiethylamin	GENE	HSDB	HSDB	RTEC	
55210	Benzamide					
55630	Nitroglycerin					
56235	Carbon tetrachloride		HAD		HAD	HAD
56382	Parathion		HSDB	HSDB	RTEC	HSDB
57125	Cyanide compounds		ATSD		ATSD	ATSD

This matrix is not connected with any EPA regulation. Entries indicate availability of information based on a literature review; blank entries indicate only that no information was found in the scope of the review.

Press [←┘]: Continue Matrix [F1]: NOTES [Esc]: Exit

2.3 List of Chemicals by Information Source

Option 3 on the main menu allows the user to view or print lists of chemicals by an applicable information source. Exhibit 2.13 shows the menu for accessing lists of chemicals by information source.

Exhibit 2.13

List of Chemicals by Information Source

SARA Section 313 Roadmaps System

1 - Select fields from the SARA 313 database
2 - Ambient Water Quality Criteria Documents
3 - Drinking Water Criteria Documents
4 - Drinking Water Health Advisory
5 - EPA's Integrated Risk Information System (IRIS)
6 - Toxicity One-Liners
7 - Health Effects Assessments
8 - Chemical Hazard Information Profiles (CHIP)
9 - Hazard Assessment Documents
A - Health and Environmental Effects Profiles
B - NIOSH Criteria Documents

X - Exit to ROADMAPS Main Menu

Use ↑,↓ to select option and hit (←┘)

2.3.1 Selecting a Field or Information Source

Selecting option 2 through B on the above menu (Exhibit 2.13) allows the user to view or print a list of chemicals for a limited number of commonly referenced sources. For example, selecting option 6 - Toxicity One-Liners gives the output shown in Exhibit 2.14 below, a listing of all chemicals for which a Toxicity One-Liner document is available. The system will prompt the user to specify the order of the chemical list (indexed by CAS number or chemical name).

Exhibit 2.14

6 - Toxicity One-Liners Total 39

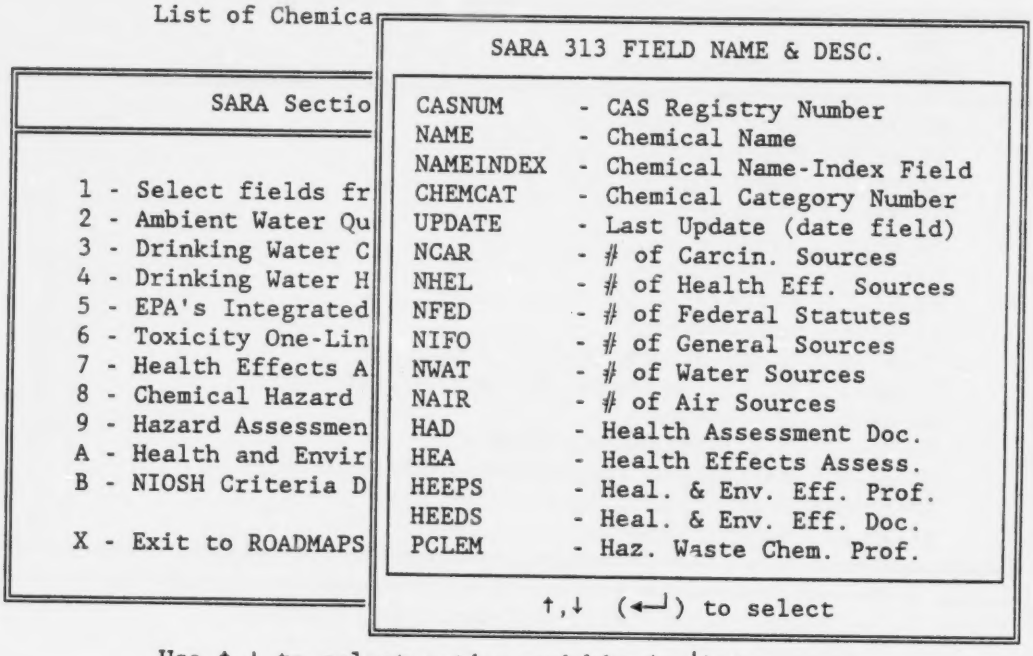
CAS Number	Chemical Name	TOX1LIN
50-00-0	Formaldehyde	X
52-68-6	Trichlorfon	X
56-38-2	Parathion	X
57-74-9	Chlordane	X
58-89-9	Lindane	X
62-73-7	Dichlorvos	X
63-25-2	Carbaryl	X
72-43-5	Methoxychlor	X
74-83-9	Bromomethane (Methyl bromide)	X
75-09-2	Dichloromethane (Methylene chloride)	X
76-44-8	Heptachlor	X
79-00-5	1,1,2-Trichloroethane	X
82-68-8	Quintozene (Pentachloronitrobenzene)	X
87-86-5	Pentachlorophenol (PCP)	X
91-20-3	Naphthalene	X

↑: Up →:Column right F2:Synonyms ←┘:Sources
↓: Down ←:Column left F4:Print ESC: Exit

Fields other than those represented in menu options 2 through B may also be searched using option 1 - Select Field from SARA 313 Database. Selecting option 1 causes a menu to appear in a window on the screen, as shown below in Exhibit 2.15.

Exhibit 2.15

Select Fields from SARA 313 Database


List of Chemica
SARA Sectio
1 - Select fields fr
2 - Ambient Water Qu
3 - Drinking Water C
4 - Drinking Water H
5 - EPA's Integrated
6 - Toxicity One-Lin
7 - Health Effects A
8 - Chemical Hazard
9 - Hazard Assessmen
A - Health and Envir
B - NIOSH Criteria D
X - Exit to ROADMAPS
SARA 313 FIELD NAME & DESC.
CASNUM - CAS Registry Number
NAME - Chemical Name
NAMEINDEX - Chemical Name-Index Field
CHEMCAT - Chemical Category Number
UPDATE - Last Update (date field)
NCAR - # of Carcin. Sources
NHEL - # of Health Eff. Sources
NFED - # of Federal Statutes
NIFO - # of General Sources
NWAT - # of Water Sources
NAIR - # of Air Sources
HAD - Health Assessment Doc.
HEA - Health Effects Assess.
HEEPS - Heal. & Env. Eff. Prof.
HEEDS - Heal. & Env. Eff. Doc.
PCLEM - Haz. Waste Chem. Prof.
↑,↓ (←┘) to select
Use ↑,↓ to select option and hit (←┘)

This menu window contains the name and a brief description of each field in the main data base, SARA313.DBF. The user scrolls down the menu to a particular field name and presses the return key. A dBase message appears at the bottom of the screen, similar to the one shown below in Exhibit 2.16.

Exhibit 2.16

List of Chemicals by Information Source

```
                SARA Section 313 Roadmaps System

    1 - Select fields from the SARA 313 database
    2 - Ambient Water Quality Criteria Documents
    3 - Drinking Water Criteria Documents
    4 - Drinking Water Health Advisory
    5 - EPA's Integrated Risk Information System (IRIS)
    6 - Toxicity One-Liners
    7 - Health Effects Assessments
    8 - Chemical Hazard Information Profiles (CHIP)
    9 - Hazard Assessment Documents
    A - Health and Environmental Effects Profiles
    B - NIOSH Criteria Documents

    X - Exit to ROADMAPS Main Menu
```

Field is Character Press Enter or Change searching condition...
Input Condition

```
.not. empty(a->HAD)
```

If the user would like a listing of chemicals for which the chosen field is not empty (i.e., for which the field applies for that chemical), the user may simply press enter at this point to get the listing. To perform other types of searches, this command may be changed (consult a dBase III manual for correct command syntax).

2.3.2 Accessing Chemical-Specific Source Information

Chemical-specific source information can be accessed for individual chemicals from lists of chemicals generated under this option. From the chemical list (Exhibit 2.14), the user must move the cursor to highlight the desired chemical, then press enter. A window will appear (Exhibit 2.17) showing the portion of the menu for chemical-specific data retrieval (see Exhibit 2.3) that contains the selected chemical. At this point the user should follow the directions in Section 2.1 for viewing and printing chemical-specific information.

Exhibit 2.17

6 - Toxicity One-Liners Total 39

CAS Number	Chemical Name	TOX1LIN
50-00-0	Formaldehyde	X
52-68-6	Trichlorfon	X
56-38-2	Parathion	X
57-74-9	Chlordane	X
58-89-9	Lindane	X
62-73-7	Dichlorvos	X

Number of Reference Sources Available

CAS Number	Chemical Name	Carc	Hlth Eff.	Fed. Reg.	Gen. Info	Water	Air
50-00-0	Formaldehyde	4	6	14	26	8	45

↑: Up →:Column right F2:Synonyms ←┘:Sources
↓: Down ←:Column left ESC: Exit

2.4 List of Chemicals by Federal Regulatory Levels

Using Option 4 from the main menu, the user can choose from a list of regulatory levels and standards (see Exhibit 2.18) and view or print a list of section 313 chemicals that are covered by the regulation and the regulatory level or standard that applies to each chemical. As an example, Exhibit 2.19 shows part of the list of chemicals for which there are CERCLA RQs. Chemical-specific source lists may also be accessed from the screen shown in Exhibit 2.19, by moving the cursor to highlight the desired chemical and pressing enter.

Exhibit 2.18

List of Chemicals by Federal Regulatory Levels

SARA Section 313 Roadmaps System
1 - CERCLA RQ (pounds) 2 - SARA TPQ (pounds) 3 - OSHA PEL (8-hr TWA) 4 - ACGIH TLV (8-hr TWA) 5 - Drinking Water Maximum Contaminant Level 6 - RCRA Toxicity Characteristic (mg/l) 7 - RCRA Toxicity Characteristic proposed 6/13/86 X - Exit to ROADMAPS Main Menu

Use ↑,↓ to select option and hit (←┘)

Exhibit 2.19

1 - CERCLA RQ (pounds) Total 193

CAS Number	Chemical Name	RQ
50-00-0	Formaldehyde	1000#
51-28-5	2,4-Dinitrophenol	10
51-79-6	Urethane (Ethyl carbamate) (monomer)	1#
52-68-6	Trichlorfon	100
53-96-3	2-Acetylaminofluorene	1#
55-18-5	N-Nitrosodiethylamine	1#
55-63-0	Nitroglycerin	10
56-23-5	Carbon tetrachloride	5000#
56-38-2	Parathion	1#
57-12-5	Cyanide compounds	10
57-14-7	1,1-Dimethyl hydrazine	1#
57-74-9	Chlordane	1#
58-89-9	Lindane	1#
60-11-7	4-Dimethylaminoazobenzene	1#
60-34-4	Methyl hydrazine	10

↑: Up	→:Column right	F2:Synonyms	←┘:Sources
↓: Down	←:Column left	F4:Print	ESC: Exit

2.5 On-line ROADMAPS Information Sources

Selecting option 5 on the Main Menu will allow the user to view all the sources of information and possible entries. The system loads all the sources into memory and displays an option menu (see Exhibit 2.20).

Exhibit 2.20

ROADMAPS

On-line ROADMAPS Information Sources	
1 - Carcinogenicity	(18 entries)
2 - Health & Environmental Effects	(63 entries)
3 - Federal Regulations	(28 entries)
4 - General Information	(41 entries)
5 - Water Information Sources	(78 entries)
6 - Air Information Sources	(92 entries)
X - Exit to Previous Menu	

Use ↑,↓ to select option and hit (↵)

The user must select the desired type of information. Roadmaps will display all the entries on the screen (see Exhibit 2.21).

Appendix B lists all the entries included under each menu option. Expanded descriptions of the general information sources are accessible from the general information source screen (Option 4 on the menu shown in Exhibit 2.21). The user should move the cursor vertically until the desired source is highlighted and then press the return key. A sample of an expanded description is shown in Exhibit 2.8.

Exhibit 2.21

Federal Regulations

Number of
Sources: 28

On-line Information Sources/References

1. Resource Conservation and Recovery Act Appendix IX - Ground-Water Monitoring List, chemicals for which ground-water monitoring is required, 40 CFR 264.

2. Clean Air Act Section 111, National Emission Standards for Hazardous Air Pollutants, 40 CFR 360

3. Clean Air Act Section 112, National Emission Standards for Hazardous Air Pollutants, 40 CFR 61

4. EPA's Office of Air and Radiation is assessing to determine if regulations under the Clean Air Act for any new or additional source categories are warranted.

↑: Up one Source PgDn:Next page
↓: Down one Source PgUp:Previous Page F4:Print ESC: Exit

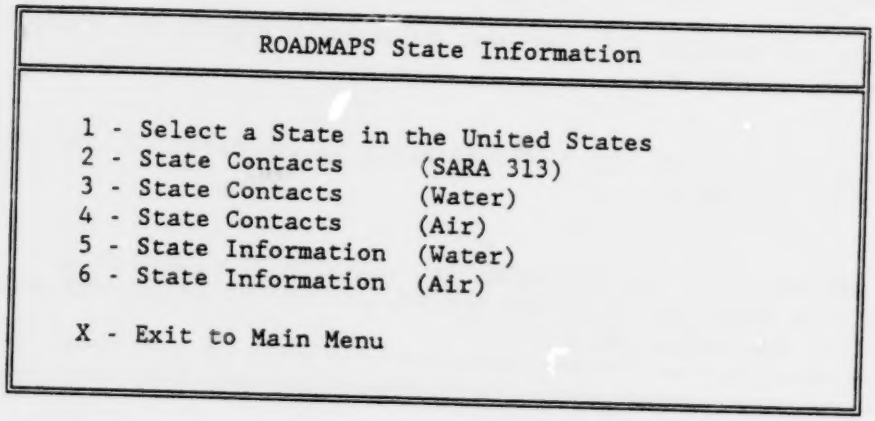
Notice that in Exhibit 2.21 the total number of entries is 31. The system displays the 31 entries on 8 different pages. The user may advance forward or backward a page by using the "PgUp" and "PgDn" keys.

2.6 ROADMAPS State Information

Information on state contacts and air and water regulatory and monitoring programs can be accessed from option 6 on the Main Menu. Selecting option 6 gives the user the options for state information shown in Exhibit 2.22.

Exhibit 2.22

All States in the United States


ROADMAPS State Information
1 - Select a State in the United States
2 - State Contacts (SARA 313)
3 - State Contacts (Water)
4 - State Contacts (Air)
5 - State Information (Water)
6 - State Information (Air)
X - Exit to Main Menu

Use ↑,↓ to select option and hit (↵)

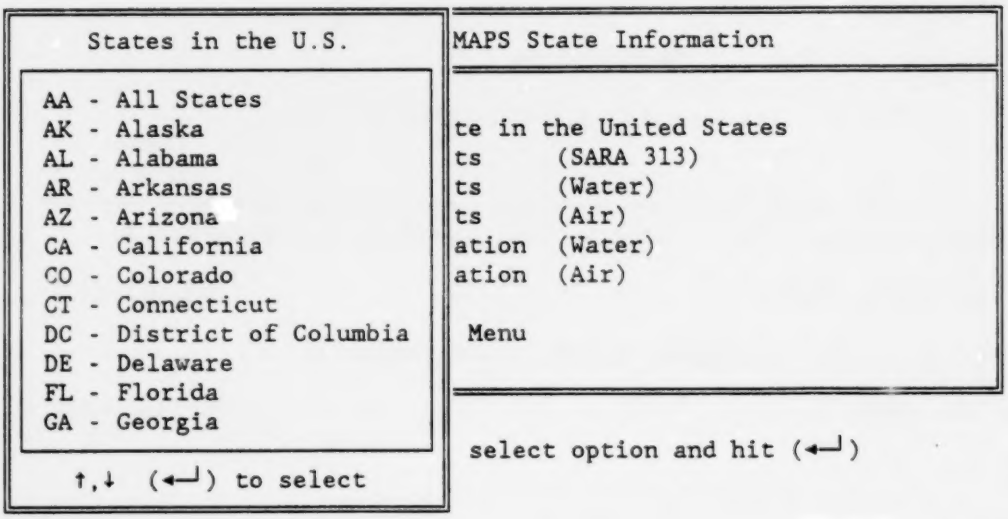
2.6.1 Selecting a State

Listings of state contacts (options 2 through 4) can be generated for all states or for an individual state. Options 5 and 6 are for listing chemicals by state regulatory or monitoring programs, and require the user to select a state before execution.

To select a state, the user can chose option 1 - Select a State in the United States. A window appears on the left hand side of the screen listing the fifty states and other territories of the United States (see Exhibit 2.23 below). The user must move the cursor to highlight the desired state, and then press the return key. The selected state will then appear at the top of the menu screen. After selecting a state, information retrieved using options 2 through 5 will apply only to the selected state. To change the selected state, the user simply reselects a state using option 1.

Exhibit 2.23

All States in the United States



2.6.2 Viewing and Printing Contact Information

Contacts for an individual state or for all states can be accessed using options 2 through 4. Exhibit 2.24 below shows the list of SARA 313 contacts for the state of Alaska.

Exhibit 2.24

State Contacts (SARA 313)

Number of Contacts: 2

1. Alaska Emergency Response Commission, Dept. of Environ. Conservation
   P.O. Box O
   Juneau, AK 99811-1800
   (907)465-2600

2. Pesticides and Toxic Substances Branch, USEPA Region 10
   1200 Sixth Avenue
   Seattle, WA 98101
   (206)442-4016

↑: Up one Source PgDn:Next page
↓: Down one Source PgUp:Previous Page F4:Print ESC: Exit

2.6.3 Viewing and Printing Chemical Lists

Options 5 and 6 allow the user to generate lists of chemicals that may be regulated, monitored, or included in research programs in individual state air or water programs. For example, after selecting the state of California, the user may select option 6 - State Information (Air). A menu (Exhibit 2.25) will appear listing the options for categories in the California air program.

Exhibit 2.25

SARA Section 313 Roadmaps Database

1. Pollutant research -- California (NATICH)
2. Source testing information -- California (NATICH)
3. Ambient air monitoring information -- California (NATICH)
4. Air toxics emission inventory information -- California (NATICH)
5. Permitting information -- California (NATICH)

E - Exit to State Menu

For list of chemicals covered use ↑,↓ to select option and hit Return (↵)

The first page of the chemical list generated by choosing option 1 - Pollutant Research from this menu is shown in Exhibit 2.26.

Exhibit 2.26

Pollutant research -- California (NATICH)

CAS Number	Chemical Name	Total 17 AIRPOLR
50-00-0	Formaldehyde	X
56-23-5	Carbon tetrachloride	X
67-66-3	Chloroform	X
71-43-2	Benzene	X
75-01-4	Vinyl chloride (monomer)	X
75-09-2	Dichloromethane (Methylene chloride)	X
75-21-8	Ethylene oxide	X
79-01-6	Trichloroethylene	X
106-93-4	1,2-Dibromoethane (Ethylene dibromide)	X
107-06-2	1,2-Dichloroethane (Ethylene dichloride)	X
108-95-2	Phenol	X
123-91-1	1,4-Dioxane	X
127-18-4	Tetrachloroethylene (Perchloroethylene)	X
1332-21-4	Asbestos (friable)	X
7440-38-2	Arsenic and compounds	X

↑: Up →:Column right
↓: Down ←:Column left F4:Print ESC: Exit

To print the list the user presses the <F4> key as directed at the bottom of the list and directs the output to a printer or to a file. State air information and contacts are from the National Air Toxics Information Clearinghouse (NATICH). Water information and contacts are from the Federal-State Toxicology and Regulatory Alliance Committees (FSTRAC) Summary of State and Federal Drinking Water Standards and Guidelines and from the Storage and Retrieval (STORET) system for water quality data.

2.7 Index All ROADMAPS Database Files

Selecting option I on the Main Menu reindexes the system database files. The index files are necessary in order to locate data items quickly. Notice that CLIPPER creates NTX files, and dBASE III creates NDX files. These indexes are files of pointers that point to the next record in a database according to a certain sort field (e.g., the SARA313C.NTX file is indexed on the field CASNUM in the SARA313.DBF). At times the index files are disrupted due to power failure or improper closing of database and index files. If the Roadmaps system fails to locate a valid CAS number, chances are an index file has been corrupted and the index files must be rebuilt. The index option can be run at any time without damaging the database files.

2.8 Reselect Printer/Printing Setup

Selecting option P on the main menu allows the user to reselect the printer or printing setup chosen when he/she first entered the ROADMAPS system. The user should follow the steps given at the beginning of this chapter to select the printer and printing setup. This option is only necessary if the user changes printers during a run, if the user desires a new printing orientation or page length, or if the original printer setup options were entered incorrectly. If a particular model of printer is not listed in the options or if other difficulties are encountered attempting to print, the user should direct print output to a file and then print the file outside the ROADMAPS system using the DOS PRINT command (see a DOS manual for details).

2.9 Exit to DOS

Selecting option E on the Main Menu closes all files and takes the user back to DOS. The user should always exit the system with this option. Do not turn the PC off or re-boot the system while inside the Roadmaps system. This may cause damage to an index or database file.

The Alt-C key has been set up to stop execution of the Roadmaps system at any time. The message, " **Continue?** ", appears at the top right hand corner of the screen. The user should always hit "N" to Quit from the program.

2.10 Delete Old Files

If the user directs print output to print files, it is advisable to delete the files after printing. This can be done from DOS by typing "erase *.PRN" or "erase (filename)".

3.0 Adding Information Sources to the Roadmaps System

The Roadmaps system (version 2.10) has been designed to allow a user to add information sources without changing the ROADMAPS.PRG source code. dBASE III is required to add records to databases and to modify the structure of the SARA313.DBF[6]. The following six steps must be followed to successfully add an information source:

- Add an information source description to one of six database files containing descriptions (see Section 3.1);
- Add a record to the SORCE313 database file (see Section 3.2);
- Modify the SARA313 database file and add new data as appropriate (see Section 3.3);
- Add new field names and descriptions to the SARACODE database file as appropriate (see Section 3.4);
- Run the REFCNT program to change the number of reference sources for the chemical information menu (see Section 3.5); and
- Index all database files (see Section 3.6).

For example, if the user wanted to add a new general information source containing information on some of the section 313 chemicals, he/she would add a coded source name and source description to the ISOURCE database; add a record to the SORCE313 database including the same coded name as in ISOURCE and indicating that ISOURCE is the database where the information is found; add a new field name (the same coded name as in ISOURCE and SORCE313) to the SARA313 database and enter 'X's in the new field for the chemicals to which the new information source is applicable; add the new field name and a brief description to the SARACODE database; run the REFCNT program to include the new reference and new chemical entries in the reference source totals; and index the database files. Each of these steps is described in more detail below.

3.1 Adding an Information Source Description

The user must add the new information source description into one of six database files, depending on the type of information being added. Brief descriptions of the contents of all database files appear in Section 1.3 of this manual. The file structures are presented in Appendix A. Exhibit 3.1 describes the database files that contain information source descriptions. The FEDSTAT database file, with descriptions of Federal regulations, allows the user to add up to 160 characters in the DESC field for an information source description. The ISOURCE database file, which contains descriptions of information sources such as documents and data bases, has a 210-character DESC field. The CHR2CODE, HEALTHEF, AIRCODE, and WATSORCE database files have an

---

[6] Consult a dBASE III manual for further information on how to add records and modify the structure of a database.

Exhibit 3.1

Files Used for Information Source Descriptions

File Name	Type of Information	Number of Characters in Code Field (CODE)	Number of Characters in Description Field (DESC)
FEDSTAT.DBF	Descriptions of federal regulations referenced in Roadmaps	12	160
ISOURCE.DBF	Descriptions of general information sources referenced in Roadmaps	12	210
HEALTHEF.DBF	Explanations of health effects indicated for chemicals in Roadmaps, with references	12	80
CHR2CODE.DBF	Explanations of carcinogenicity effects indicated for chemicals in Roadmaps, with references	2	80
AIRCODE.DBF (Also includes a 2-character state field, STATE)	Explanations of state air information for chemicals in Roadmaps, with references	10	80
WATSORCE (Also includes a 2-character state field, STATE)	Explanations of state water information for chemicals in Roadmaps, with references	10	80

80 character DESC field. The DESC field in each of the files contains the information that will appear on-screen or in print when the user views or prints information from the data base. If the new source description is greater than 80 characters, it must be entered into either the FEDSTAT or ISOURCE database files. The Roadmaps system cannot handle a source description over 210 characters in length. Notice that the structure of the CHR2CODE.DBF has a 2 character CODE field (see Exhibit 3.2).

Exhibit 3.2

```
Structure for database:   C:\ROADMAPS\CHR2CODE.DBF
Number of data records:        12
Date of last update    :   6/22/89
Field  Field Name   Type         Width     Dec
    1  CODE         Character        2
    2  DESC         Character       80
** Total **                        83
```

If you want an information source identifier name to be larger than 2 characters in length, add the source to one of the other 5 database files. To add a record, get into dBASE III and at the dot prompt type the following commands:

- use chr2code (open the CHR2CODE.DBF)
- append (add a blank record to the bottom of the database)

dBASE III will display a data entry screen which will allow the user to enter the needed code and description (see Exhibit 3.3). To be consistent with the previous sources, use upper case letters to add the source identifier name to the CODE field. It is important to hit the Ctrl-End keys to properly Exit/Save the new information source.

Exhibit 3.3

Data Entry Screen

CAPS

Record No. 13

CURSOR <-- --> Char: Word: Home End	UP DOWN Field: Page: PgUp PgDn Help: F1	DELETE Char: Del Field: ^Y Record: ^U	Insert Mode: Ins Exit/Save: ^End Abort: Esc Memo: ^Home

CODE XX
DESC XXXX

3.2 Adding a Record to SORCE313.DBF

The SORCE313.DBF contains all the field names listed in the main data base (SARA313.DBF), the name of the data base in which a description of the field is found (this is the description used for viewing or printing by the user), a code indicating the type of entry found in the SARA313.DBF, and a numeric entry showing the order in which the information for each field will appear on the screen and in print.

After adding the information source, the user must add a record to the SORCE313.DBF. This added record needs information in four fields (see Exhibit 3.4). Each of these fields is described in the following sections.

Exhibit 3.4

```
Structure for database: C:\ROADMAPS\SORCE313.DBF
Number of data records:     236
Date of last update    : 06/22/89
Field  Field Name  Type       Width    Dec
    1  FIELDS      Character     10
    2  DATABASE    Character      8
    3  LOOKUP      Character      1
    4  ORDER       Numeric        2
** Total **                     22
```

Exhibit 3.5 shows some of the entries in the SORCE313 data base.

3.2.1 Description of the Field Name FIELDS in SORCE313.DBF

The field name FIELDS is used to identify the link between the SARA313.DBF and the location of the information source. This field contains the information source fields located in the structure of the SARA313.DBF. FIELDS might be, for example, an abbreviation representing the name of a data source containing information on some of the Section 313 chemicals.

The user may enter up to 10 characters for a field name. In step 3.3 the user must add this field name to the structure of the SARA313.DBF. Again, use upper case letters for the FIELDS input.

3.2.2 Description of the Field Name DATABASE in SORCE313.DBF

The field name DATABASE is used to identify the location of the information source description as described in Section 3.1. This input must be one of the six source databases files: CHR2CODE, FEDSTAT, HEALTHEF, ISOURCE, WATSORCE, and AIRCODE. Use upper case letters for the DATABASE input.

3.2.3 Description of the Field Name LOOKUP in SORCE313.DBF

The field name LOOKUP is used to identify the type of entry that is made in the main database files and the way the program will link the entry to its description in information sources displayed during the running of Roadmaps. This input must be one of four codes: "X", "E", "P", or "C".

Exhibit 3.5

Entries in SORCE313.DBF

FIELDS	DATABASE	LOOKUP	ORDER
HAD	ISOURCE	X	1
HEA	ISOURCE	X	2
HEEPS	ISOURCE	X	3
HEEDS	ISOURCE	X	4
PCLEM	ISOURCE	X	5
ODWHAP	ISOURCE	X	6
CEPP	ISOURCE	X	7
HSDB	ISOURCE	E	8
CHIP	ISOURCE	X	9
AQCD	ISOURCE	X	10
WQCD	ISOURCE	X	11
DWCD	ISOURCE	X	12
RISKASSESS	ISOURCE	X	13
EXPASSESS	ISOURCE	X	14
RQCAR	ISOURCE	X	15
RQTOX	ISOURCE	X	16
NIOSHCRIT	ISOURCE	X	17
NIOSHCIB	ISOURCE	X	18
IARC	ISOURCE	X	19
CHEMTRACK	ISOURCE	X	20
GENE	ISOURCE	X	21
RTECS	ISOURCE	X	22
AQUIRE	ISOURCE	X	23
ENVIRO	ISOURCE	X	24
SRCENVIRO	ISOURCE	X	25
LOGP	ISOURCE	X	26
FYI	ISOURCE	X	27
ACGIH	ISOURCE	X	28
ACGIHTLV	ISOURCE	E	29
CERCLA	FEDSTAT	X	1
RQ	FEDSTAT	P	2
SARA302	FEDSTAT	X	3
TPQ	FEDSTAT	P	4
DWSTD	FEDSTAT	E	5
PROMCL	FEDSTAT	E	6
NEWSTD	FEDSTAT	X	7
DWGOAL	FEDSTAT	E	8
PROMCLG	FEDSTAT	E	9
OSHAZ	FEDSTAT	X	10
OSHAPEL	FEDSTAT	E	11
CWA311	FEDSTAT	X	12
CWA307	FEDSTAT	X	13
CAA111	FEDSTAT	X	14
CAA112	FEDSTAT	X	15

Code 1 - "X" This code would be entered in LOOKUP if, for example, an "X" in the SARA313 database identifies chemicals for which there is information in the data source given in FIELDS.

Code 2 - "E" This code would be entered in LOOKUP if chemical-specific alphanumeric entries are made in the SARA313 database (for example, regulatory standards and their corresponding units).

Code 3 - "P" This code would be entered in LOOKUP if a numeric value equivalent to a number in pounds (for example, RQ and TPQ) is entered for chemicals in the SARA313 database.

Code 4 - "C" This code would be entered in LOOKUP if coded entries are made for chemicals in the SARA313 database. An example of a coded entry is "HP" for a human positive carcinogenicity rating for the field IARCRATE.

Descriptions of how Roadmaps accesses the database files for each of these LOOKUP field codes is included in Appendix D.

3.2.4 Description of the Field Name ORDER in SORCE313.DBF

The field name ORDER is used to determine which information sources should appear first on the screen or in printouts. The field ORDER is a two digit numeric field and is sorted in ascending order. The Roadmaps system indexes the SORCE313.DBF on the primary field DATABASE and secondary field ORDER. This causes the Roadmaps system to load CHR2CODE.DBF sources with ORDER = 1 first. If there are two records with the same DATABASE and ORDER values, the Roadmaps system will load into the temporary database the record that was entered first in the SORCE313 database. The user should determine the highest ORDER number for the database to which the new description is being added (see Exhibit 3.4), and assign a higher ORDER number so that the new description will appear at the end of an information screen or printout, or assign new order numbers if he/she wishes to reorder the information.

3.3 Modifying SARA313.DBF

The SARA313.DBF contains all the chemical specific information for each of the Section 313 chemicals. Fields CASNUM, NAME, and UPDATE are used to identify and describe the Section 313 chemicals. The rest of the fields are linked via the SORCE313.DBF to the information source database files. The new source name which was entered in the SORCE313.DBF must be added to the SARA313.DBF structure. To do this, get into dBASE III and at the dot prompt type the following commands:

```
. use sara313          (open the SARA313.DBF)
. modify structure     (modify the structure)
```

The structure of the SARA313 database will be displayed. Move the cursor to the place where the new source field should be added. The position of the new field is not important. However, one should keep the fields grouped together by their location in the various databases. For example, if you are going to add the information source description in the FEDSTAT.DBF, you should insert the new field somewhere between the CERCLA and DOT fields.

To insert the new field, press the Ctrl-N keys and dBASE III will allow you to enter the name of the field. Notice that a field name can be 10 characters in length. The field type must be character. The field width must be between 1 and 30. Make the field width 1 if an "X" is to be placed in the field and Code 1 - "X" was entered in the field LOOKUP of the SORCE313.DBF. The field width will need to be wider to accommodate other types of data entries. For example, the width of the TPQ field is 13. This is to allow a threshold planning quantity to be placed in the TPQ field.

Entries for chemicals to which the new field is applicable may be made in the SARA313.DBF using the dBASE "edit" or "browse" commands.

3.4 Modifying SARACODE.DBF

If new fields are added to SARA313, the new field name and a brief description of the contents of the field should be added to SARACODE.DBF. This will allow the user to obtain a list of chemicals to which the new field applies, using Option 3 - List of Chemicals by Information Source from the Main Menu, followed by Option 1 - select fields from the SARA 313 database. The user should use dBase III commands to add the field name and description to SARACODE, as follows:

- use SARACODE (open the SARACODE.DBF)
- go (record number preceding location of new field) (go to the record that should precede the new record)
- insert (add the new record)

Enter the field name, in capital letters, as it appears in SARA313, in the field FIELD_NAME. A brief description should be entered in the field FIELD_DESC.

3.5 Recounting Data Sources (Running REFCNT)

The program REFCNT.PRG counts the reference sources for each chemical. If a new source is added to the data base or entries in the SARA313 data base are changed (e.g., if the entries are updated), the number of references (e.g., the number shown in the chemical information menu under the heading General Information) will change, and the REFCNT program must be run. To run the program type the following at the DOS prompt:

C:\ROADMAPS> **REFCNT**

A menu screen will appear allowing the user to choose the file that requires updating (see Exhibit 3.6). In most cases, only the SARA313.DBF file will require updating, however if changes are made to the AIR313.DBF or WATER313.DBF files these also will require updating by the REFCNT program. Move the cursor to highlight the desired option and then press enter. Running a REFCNT option will take a few minutes; REFCNT will display a counter showing the progress of the updating process. When the update is complete, press the <ESC> key to return to the DOS prompt.

3.6 Indexing All Database Files

The final step in successfully adding a new information source to the Roadmaps system is to index all the database files. To do this enter option "I" on the Main Menu.

APPENDIX A: STRUCTURE OF DATABASE FILES IN ROADMAPS

ucture for database: I:air313.dbf
ber of data records: 309
e of last update : 07/07/89

ld	Field Name	Type	Width	Dec
1	CASNUM	Numeric	8	
2	NAME	Character	45	
3	NAMEINDEX	Character	20	
4	AIRAMSTAZ	Character	1	
5	AIRAMSTCO	Character	1	
6	AIRAMSTCT	Character	1	
7	AIRAMSTFL	Character	1	
8	AIRAMSTIN	Character	1	
9	AIRAMSTKS	Character	1	
10	AIRAMSTKY	Character	1	
11	AIRAMSTMA	Character	1	
12	AIRAMSTMD	Character	1	
13	AIRAMSTMI	Character	1	
14	AIRAMSTMT	Character	1	
15	AIRAMSTNC	Character	1	
16	AIRAMSTND	Character	1	
17	AIRAMSTNV	Character	1	
18	AIRAMSTNY	Character	1	
19	AIRAMSTPA	Character	1	
20	AIRAMSTRI	Character	1	
21	AIRAMSTSC	Character	1	
22	AIRAMSTSD	Character	1	
23	AIRAMSTTX	Character	1	
24	AIRAMSTVA	Character	1	
25	AIRAMSTWA	Character	1	
26	AIRAMSTWY	Character	1	
27	AIRPOLRECA	Character	1	
28	AIRPOLRECT	Character	1	
29	AIRPOLREIA	Character	1	
30	AIRPOLREIN	Character	1	
31	AIRPOLRELA	Character	1	
32	AIRPOLREMA	Character	1	
33	AIRPOLREMN	Character	1	
34	AIRPOLRENC	Character	1	
35	AIRPOLRENV	Character	1	
36	AIRPOLREOH	Character	1	
37	AIRPOLRERI	Character	1	
38	AIRPOLRETX	Character	1	
39	AIRSOTSTCA	Character	1	
40	AIRSOTSTMN	Character	1	
41	AIRSOTSTNJ	Character	1	
42	AIRSOTSTNV	Character	1	
43	AIRSOTSTTN	Character	1	
44	AIRSOTSTWA	Character	1	
45	AIRAMONAL	Character	1	
46	AIRAMONAR	Character	1	
47	AIRAMONAZ	Character	1	
48	AIRAMONCA	Character	1	
49	AIRAMONCT	Character	1	
50	AIRAMONDE	Character	1	
51	AIRAMONIL	Character	1	
52	AIRAMONIN	Character	1	
53	AIRAMONKS	Character	1	
	AIRAMONLA	Character	1	
	AIRAMONMA	Character	1	

```
    56  AIRAMONMD    Character        1
    57  AIRAMONMI    Character        1
    58  AIRAMONMN    Character        1
    59  AIRAMONMO    Character        1
    60  AIRAMONMT    Character        1
    61  AIRAMONNH    Character        1
    62  AIRAMONNJ    Character        1
    63  AIRAMONNV    Character        1
    64  AIRAMONOH    Character        1
    65  AIRAMONPA    Character        1
    66  AIRAMONRI    Character        1
    67  AIRAMONSC    Character        1
    68  AIRAMONTN    Character        1
    69  AIRAMONTX    Character        1
    70  AIRAMONWA    Character        1
    71  AIRAMONWI    Character        1
    72  AIRAMONWY    Character        1
    73  AIREMINAZ    Character        1
    74  AIREMINCA    Character        1
    75  AIREMINID    Character        1
    76  AIREMININ    Character        1
    77  AIREMINKS    Character        1
    78  AIREMINMA    Character        1
    79  AIREMINMN    Character        1
    80  AIREMINMO    Character        1
    81  AIREMINNJ    Character        1
    82  AIREMINNV    Character        1
    83  AIREMINOK    Character        1
    84  AIREMINPA    Character        1
    85  AIREMINRI    Character        1
    86  AIREMINSD    Character        1
    87  AIREMINTN    Character        1
    88  AIREMINWA    Character        1
    89  AIREMINWI    Character        1
    90  AIRPERMCA    Character        1
    91  AIRPERMGA    Character        1
    92  AIRPERMIA    Character        1
    93  AIRPERMWA    Character        1
    94  AIRPERMWY    Character        1
    95  EPARISKAN    Character        1
** Total **                          166

Structure for database: I:aircode.dbf
Number of data records:      92
Date of last update    : 05/23/89
Field  Field Name  Type       Width     Dec
    1  CODE        Character     10
    2  DESC        Character     80
    3  STATE       Character      2
** Total **                          93

Structure for database: I:chr2code.dbf
Number of data records:      18
Date of last update    : 07/03/89
Field  Field Name  Type       Width     Dec
    1  CODE        Character      2
    2  DESC        Character     80
** Total **                          83
```

ucture for database: I:con313.dbf
ber of data records: 102
e of last update : 07/07/89

eld	Field Name	Type	Width	Dec
1	STCODE	Character	4	
2	AGENCY	Character	72	
3	ADDR1	Character	40	
4	ADDR2	Character	25	
5	ZIP	Character	11	
6	PHONE	Character	13	
Total **			166	

ucture for database: I:contacts.dbf
ber of data records: 112
e of last update : 07/03/89

eld	Field Name	Type	Width	Dec
1	STCODE	Character	4	
2	AGENCY	Character	72	
3	ADDR1	Character	40	
4	ADDR2	Character	25	
5	ZIP	Character	11	
6	PHONE	Character	13	
Total **			166	

ucture for database: I:contactw.dbf
ber of data records: 92
e of last update : 07/03/89

eld	Field Name	Type	Width	Dec
1	STCODE	Character	4	
2	AGENCY	Character	72	
3	ADDR1	Character	40	
4	ADDR2	Character	25	
5	ZIP	Character	11	
6	PHONE	Character	13	
Total **			166	

ucture for database: I:fedstat.dbf
ber of data records: 28
e of last update : 07/07/89

eld	Field Name	Type	Width	Dec
1	CODE	Character	12	
2	DESC	Character	160	
Total **			173	

ucture for database: I:healthef.dbf
ber of data records: 63
e of last update : 06/29/89

eld	Field Name	Type	Width	Dec
1	CODE	Character	12	
2	DESC	Character	80	
Total **			93	

Structure for database: I:help.dbf
Number of data records: 5
Date of last update : 07/05/89

Field	Field Name	Type	Width	Dec
1	CALLPROG	Character	12	
2	LINENO	Numeric	6	
3	INPVAR	Character	12	
4	IROW	Numeric	2	
5	ICOL	Numeric	2	
6	FROW	Numeric	2	
7	FCOL	Numeric	2	
8	FLGHEAD	Logical	1	
9	HELPHEAD	Character	74	
10	BOX1CHR	Numeric	1	
11	BOX1COLOR	Character	15	
12	BOX2CHR	Numeric	1	
13	BOX2COLOR	Character	15	
14	HELPTXT	Memo	10	
** Total **			156	

Structure for database: I:isource.dbf
Number of data records: 41
Date of last update : 07/03/89

Field	Field Name	Type	Width	Dec
1	CODE	Character	12	
2	DESC	Character	210	
** Total **			223	

Structure for database: I:printer.dbf
Number of data records: 4
Date of last update : 04/06/89

Field	Field Name	Type	Width	Dec
1	PRINTER	Character	35	
2	RESET	Character	40	
3	COMPRESS	Character	40	
4	ELITE	Character	40	
5	BOXFONT	Character	40	
6	LPI6	Character	40	
7	LPI8	Character	40	
8	LPI12	Character	40	
9	PRTDEVICE	Character	4	
** Total **			320	

Structure for database: I:roadmapl.dbf
Number of data records: 49
Date of last update : 07/11/89

Field	Field Name	Type	Width	Dec
1	RCASNUM	Numeric	8	
2	RNAMEINDX	Character	20	
** Total **			29	

ucture for database: I:roadmdbf.dbf
ber of data records: 20
e of last update : 06/06/89

ld	Field Name	Type	Width	Dec
1	DBFS	Character	12	
2	NDXS	Character	12	
3	NDXEXPRS	Character	60	
4	FLGUNIQUE	Logical	1	
Total **			86	

ucture for database: I:sara313.dbf
ber of data records: 309
e of last update : 07/10/89

ld	Field Name	Type	Width	Dec
1	CASNUM	Numeric	8	
2	NAME	Character	45	
3	NAMEINDEX	Character	20	
4	UPDATE	Date	8	
5	NCAR	Numeric	3	
6	NHEL	Numeric	3	
7	NFED	Numeric	3	
8	NIFO	Numeric	3	
9	NWAT	Numeric	3	
10	NAIR	Numeric	3	
11	HAD	Character	1	
12	HEA	Character	1	
13	HEEPS	Character	1	
14	HEEDS	Character	1	
15	PCLEM	Character	1	
16	ODWHAP	Character	1	
17	CEPP	Character	1	
18	HSDB	Character	4	
19	CHIP	Character	1	
20	AQCD	Character	1	
21	WQCD	Character	1	
22	DWCD	Character	1	
23	RISKASSESS	Character	1	
24	EXPASSESS	Character	1	
25	RQCAR	Character	1	
26	RQTOX	Character	1	
27	NIOSHCRIT	Character	1	
28	NIOSHCIB	Character	1	
29	IARC	Character	1	
30	CHEMTRACK	Character	1	
31	GENE	Character	1	
32	RTECS	Character	1	
33	AQUIRE	Character	1	
34	ENVIRO	Character	1	
35	SRCENVIRO	Character	1	
36	LOGP	Character	1	
37	FYI	Character	1	
38	ACGIH	Character	1	
39	ACGIHTLV	Character	14	
40	IRIS	Character	1	
41	TOX1LINER	Character	1	
42	CHRIS	Character	1	
43	OHMTADS	Character	1	
	ISHOW	Character	1	
	NATICH	Character	1	

46	FSTRAC	Character	1
47	STORET	Character	1
48	ATSDR	Character	1
49	REGSTAND	Character	1
50	SPECREV	Character	1
51	CERCLA	Character	1
52	RQ	Character	5
53	SARA302	Character	1
54	TPQ	Character	14
55	DWSTD	Character	8
56	NEWSTD	Character	1
57	PROMCL	Character	12
58	DWSTDMAT	Character	11
59	DWGOAL	Character	8
60	PROMCLG	Character	12
61	DWGOALMAT	Character	11
62	OSHAZ	Character	1
63	OSHAPEL	Character	14
64	CWA311	Character	1
65	CWA307	Character	1
66	CAA111	Character	1
67	CAA112	Character	1
68	CAADEVELOP	Character	1
69	CAAASSESS	Character	1
70	CAANOREG	Character	1
71	RCRA	Character	1
72	APP9	Character	1
73	TOXCHAR	Character	6
74	PROTOXCHAR	Character	6
75	TOXCHARMAT	Character	14
76	TSCA	Character	1
77	TSCA8E	Character	1
78	TOXPOL	Character	1
79	DOT	Character	1
80	PESTICIDE	Character	1
81	SARA110	Character	1
82	NTPTEST	Character	2
83	NTPCLASS	Character	2
84	IARCRATE	Character	2
85	EPACARC	Character	2
86	GTOX	Character	2
87	HERITSRC	Character	5
88	DEVELSRC	Character	5
89	REPROSRC	Character	5
90	ACUTESRC	Character	5
91	CHRONICSRC	Character	5
92	NEUROSRC	Character	5
93	PERSISTSRC	Character	5
94	ENVIRO1REF	Character	5
95	ENVIRO2REF	Character	5
96	BIOACREF	Character	5
97	DELISTED	Character	1
** Total **			357

```
ructure for database: I:saracode.dbf
mber of data records:      97
te of last update    : 07/06/89
eld  Field Name  Type       Width     Dec
  1  FIELD_NAME  Character     10
  2  FIELD_DESC  Character     25
Total **                      36

ructure for database: I:sorce313.dbf
mber of data records:     253
te of last update    : 07/06/89
eld  Field Name  Type       Width     Dec
  1  FIELDS      Character     10
  2  DATABASE    Character      8
  3  LOOKUP      Character      1
  4  ORDER       Numeric        2
Total **                      22

ructure for database: I:state.dbf
mber of data records:      55
te of last update    : 06/06/89
eld  Field Name  Type       Width     Dec
  1  CODE        Character      2
  2  DESC        Character     20
Total **                      23

ructure for database: I:stateinf.dbf
mber of data records:       2
te of last update    : 07/07/89
eld  Field Name  Type       Width     Dec
  1  NAME        Character     40
  2  DESC        Character     80
  3  NUM         Character      4
Total **                     125

ructure for database: I:syn313.dbf
mber of data records:    4894
te of last update    : 03/23/89
eld  Field Name  Type       Width     Dec
  1  CASNUM      Numeric        8
  2  INDXF       Character     30
  3  SYNONYM     Character    200
Total **                     239

ructure for database: I:water313.dbf
mber of data records:     309
te of last update    : 07/07/89
eld  Field Name  Type       Width     Dec
  1  CASNUM      Numeric        8
  2  NAME        Character     45
  3  NAMEINDEX   Character     20
  4  STORETAL    Character      1
  5  STORETAK    Character      1
  6  STORETAR    Character      1
  7  STORETAZ    Character      1
  8  STORETCA    Character      1
  9  STORETCO    Character      1
     STORETCT    Character      1
     STORETDE    Character      1
```

12	STORETDC	Character	1
13	STORETFL	Character	1
14	STORETGA	Character	1
15	STORETHI	Character	1
16	STORETID	Character	1
17	STORETIL	Character	1
18	STORETIN	Character	1
19	STORETIA	Character	1
20	STORETKS	Character	1
21	STORETKY	Character	1
22	STORETLA	Character	1
23	STORETME	Character	1
24	STORETMD	Character	1
25	STORETMA	Character	1
26	STORETMI	Character	1
27	STORETMN	Character	1
28	STORETMS	Character	1
29	STORETMO	Character	1
30	STORETMT	Character	1
31	STORETNE	Character	1
32	STORETNV	Character	1
33	STORETNH	Character	1
34	STORETNJ	Character	1
35	STORETNM	Character	1
36	STORETNY	Character	1
37	STORETNC	Character	1
38	STORETND	Character	1
39	STORETOH	Character	1
40	STORETOK	Character	1
41	STORETOR	Character	1
42	STORETPA	Character	1
43	STORETRI	Character	1
44	STORETSC	Character	1
45	STORETSD	Character	1
46	STORETTN	Character	1
47	STORETTX	Character	1
48	STORETUT	Character	1
49	STORETVT	Character	1
50	STORETVA	Character	1
51	STORETWA	Character	1
52	STORETWV	Character	1
53	STORETWI	Character	1
54	STORETWY	Character	1
55	DWSTGUAZ	Character	1
56	STANDAZ	Character	4
57	DWSTGUCA	Character	1
58	DWSTGUCT	Character	1
59	STANDCT	Character	4
60	DWSTGUFL	Character	1
61	STANDFL	Character	4
62	DWSTGUIL	Character	1
63	STANDIL	Character	4
64	DWSTGUKS	Character	1
65	DWSTGUME	Character	1
66	DWSTGUMD	Character	1
67	DWSTGUMA	Character	1
68	STANDMA	Character	4
69	DWSTGUMN	Character	1
70	DWSTGUNH	Character	1
71	DWSTGUNJ	Character	1

```
 72  STANDNJ      Character       4
 73  DWSTGUNM     Character       1
 74  STANDNM      Character       4
 75  DWSTGUNY     Character       1
 76  DWSTGURI     Character       1
 77  DWSTGUEPA    Character       1
 78  STANDEPA     Character       4
 79  DWSTGUVT     Character       1
 80  DWSTGUWA     Character       1
 81  DWSTGUWI     Character       1
Total **                        176

ucture for database: I:watsorce.dbf
ber of data records:       78
e of last update    : 05/23/89
ld  Field Name  Type        Width     Dec
  1  CODE        Character      10
  2  DESC        Character      80
  3  STATE       Character       2
Total **                        93
```

APPENDIX B: PRINTOUT OF ON-LINE INFORMATION SOURCES

Carcinogenicity

- IARC Classification 1:sufficient evidence of causal relationship to human cancer
- IARC Classification 2A: probable evidence of human carcinogenicity; human data
- IARC Classification 2B: probable evidence of human carcinogenicity; animal data
- IARC Classification 3: limited evidence of carcinogenicity in animals
- EPA Classification: Human Carcinogen; sufficient evidence from epidemiology
- Animal, positive (IARC)
- Animal, suspected (IARC)
- EPA Classification: Probable Human Carcinogen (limited evidence in humans)
- EPA Classification: Probable Human Carcinogen (sufficient evidence in animals)
- EPA Classification: Possible Human Carcinogen (limited evidence in animals)
- Considered by NTP to be a known carcinogen (NTP)
- Considered by NTP to be a suspect carcinogen (NTP)
- Human suspected, animal positive (IARC)
- Human, positive (IARC)
- Human, suspected (IARC)
- Gene-tox evaluation: limited positive; indication of tumor induction (GENETOX)
- NTP Bioassay Results: Positive response in at least one animal species (NTP)
- Gene-tox evaluation: sufficient positive; tumor induction shown (GENETOX)

Health & Environmental Effects

1. Aquatic tox, lethal conc 10 ppm or less (ATSDR)
2. Aquatic tox, lethal conc 10 ppm or less (HAD)
3. Aquatic tox, lethal conc 10 ppm or less (HEED)
4. Aquatic tox, lethal conc 10 ppm or less (HEEP)
5. Aquatic tox, lethal conc 10 ppm or less (WQCD)
6. Aquatic tox, lethal conc 100 ppm or less, (ATSDR)
7. Aquatic tox, lethal conc 100 ppm or less, (HAD)
8. Aquatic tox, lethal conc 100 ppm or less, (HEED)
9. Aquatic tox, lethal conc 100 ppm or less, (HEEP)
10. Aquatic tox, lethal conc 100 ppm or less, (WQCD)
11. Acute toxicity: short-term exposure may be lethal (ATSDR)
12. Acute toxicity: short-term exposure may be lethal (DWCD)
13. Acute toxicity: short-term exposure may be lethal (HAD)
14. Acute toxicity: short-term exposure may be lethal (HEEP)
15. Aquatic toxicity, lethal concentration 10 ppm or less; reliable study (AQUIRE)
16. Aquatic tox, lethal conc 10 ppm or less; generally satisfactory study (AQUIRE)
17. Aquatic toxicity, lethal conc 10 ppm or less, not reliable study (AQUIRE)
18. Aquatic tox, lethal conc 10 ppm or less, abstract or foreign summary (AQUIRE)
19. Aquatic toxicity, lethal concentration 100 ppm or less, reliable study (AQUIRE)
20. Aquatic tox, lethal conc 100 ppm or less, generally satisfactory study (AQUIRE)
21. Aquatic toxicity, lethal conc 100 ppm or less, not reliable study (AQUIRE)

- Aquatic tox, lethal conc 100 ppm or less, abstract or foreign summary (AQUIRE)
- Acute toxicity: short-term exposure may be lethal (RTECS)
- Bioaccumulation (ATSDR)
- Bioaccumulation (WQCD)
- Bioaccumulation (ENVIROFATE)
- Bioaccumulation (HAD)
- Bioaccumulation (HEA)
- Bioaccumulation (HEEP)
- Bioaccumulation (log P Database)
- Chronic toxicity: health effects (non-cancer) from long-term exposure (ATSDR)
- Chronic toxicity: health effects (non-cancer) from long-term exposure (DWCD)
- Chronic toxicity: health effects (non-cancer) from long-term exposure (HAD)
- Chronic toxicity: health effects (non-cancer) from long-term exposure (HEA)
- Chronic toxicity: health effects (non-cancer) from long-term exposure (HEED)
- Chronic toxicity: health effects (non-cancer) from long-term exposure (HEEP)
- Chronic toxicity: health effects (non-cancer) from long-term exposure (HSDB)
- Developmental toxicity in humans (ATSDR)
- Developmental toxicity in humans (DWCD)
- Developmental toxicity in humans (HAD)
- Developmental toxicity in humans (HEA)
- Developmental toxicity in humans (HEEP)
- Developmental toxicity in humans (HSDB)

44. Heritable genetic and chromosomal mutation in humans (ATSDR)

45. Heritable genetic and chromosomal mutation in humans (GENETOX)

46. Neurotoxicity from chronic exposure (ATSDR)

47. Neurotoxicity from chronic exposure (HAD)

48. Neurotoxicity from chronic exposure (HEA)

49. Neurotoxicity from chronic exposure (HEEP)

50. Neurotoxicity from chronic exposure (HSDB)

51. Persistence (ATSDR)

52. Persistence (DWCD)

53. Persistence (ENVIROFATE)

54. Persistence (HAD)

55. Persistence (HEA)

56. Persistence (HEEP)

57. Persistence (WQCD)

58. Reproductive toxicity (ATSDR)

59. Reproductive toxicity (DWCD)

60. Reproductive toxicity (HAD)

61. Reproductive toxicity (HEA)

62. Reproductive toxicity (HEEP)

63. Reproductive toxicity (HSDB)

Federal Regulations

Resource Conservation and Recovery Act Appendix IX - Ground-Water Monitoring List, chemicals for which ground-water monitoring is required, 40 CFR 264.

Clean Air Act Section 111, National Emission Standards for Hazardous Air Pollutants, 40 CFR 360

Clean Air Act Section 112, National Emission Standards for Hazardous Air Pollutants, 40 CFR 61

EPA's Office of Air and Radiation is assessing to determine if regulations under the Clean Air Act for any new or additional source categories are warranted.

EPA's Office of Air and Radiation is developing or planning to develop Federal regulations under the Clean Air Act for new or additional source categories.

EPA's Office of Air and Radiation has published a decision not to develop Federal regulations under the Clean Air Act.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, 42 USC 9601 et seq.

Clean Water Act Section 307 (a), Toxic and Pretreatment Effluent Standards, 40 CFR 116

Clean Water Act Section 311 (b) (4), Oil and Hazardous Substances Liability, 40 CFR 116

Department of Transportation (DOT) 49 CFR 172, Subpart B Tables of Hazardous Materials, Their Description, Proper Shipping, Name, Class, Label, Packaging and RQ

Safe Drinking Water Act, 40 CFR 141, Subpart F, Maximum Contaminant Level Goal (MCLG) (non-enforceable goal based on health effects):

Safe Drinking Water Act, 40 CFR 141, Subparts B and G, Maximum Contaminant Level (MCL) (* indicates value for total trihalomethanes):

A new Maximum Contaminant Level is planned for this chemical under the Safe Drinking Water Act, 40 CFR 141

Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit, 8-hour time-weighted average (TWA) (R indicates transitional limit):

Occupational Safety and Health Administration (OSHA), General Industry Standards for Toxic and Hazardous Substances as of Jan. 19, 1989, 29 CFR 1910, Subpart Z

16. Pesticide ingredient under Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), 7 USC 136 et seq.

17. Safe Drinking Water Act, 40 CFR 141, Subparts B and G, Proposed Maximum Contaminant Level (MCL) (54 FR 22062, 5/22/89):

18. Safe Drinking Water Act, 40 CFR 141, Subpart F, Proposed Maximum Contaminant Level Goal (MCLG) (Non-enforceable goal) (50 FR 46936 or 54 FR 22062):

19. RCRA Toxicity Characteristic, concentration at or above which a chemical exhibits Extraction Procedure toxicity, proposed 6/13/86, 51 FR 21648 (mg/L):

20. Resource Conservation and Recovery Act Section 3001, Criteria for Identification or Listing, hazardous wastes and hazardous waste constituents, 40 CFR 261.

21. CERCLA Reportable Quantity (RQ) (# indicates that an adjusted RQ has been proposed; ## indicates that the RQ may be adjusted in the future):

22. Superfund Amendments and Reauthorization Act (SARA) Section 110, priority chemicals at National Priority List (NPL) hazardous waste sites

23. Superfund Amendments and Reauthorization Act (SARA) Section 302, Extremely Hazardous Substances, 40 CFR 355.

24. RCRA Toxicity Characteristic, concentration at or above which a chemical exhibits Extraction Procedure toxicity, 40 CFR 261 (mg\L):

25. Clean Water Act Section 307, Toxic Pollutant, 40 CFR 129, Subpart A, Toxic Pollutant Effluent Standards and Prohibitions.

26. SARA 302 Threshold Planning Quantity (TPQ) (* indicates that releases of 1 lb. or more must be reported under SARA section 304):

27. Toxic Substances Control Act (TSCA) Sec 8(a), Chemical Substance Inventory, 40 CFR 710

28. Toxic Substances Control Act Section 8 (e). Notices of substantial risk submitted by private sources. (OTS Public Reading Room or TSCA Assistance Office)

General Information

- American Conference of Governmental Industrial Hygienists (ACGIH), Threshold Limit Values and Biological Exposure Indices for 1986-1987 (Health)

- ACGIH Threshold Limit Value (TLV), Time Weighted Average (TWA):

- Air Quality Criteria Documents (AQCD), Used for ambient air standards in CAA sections 108-110, revised every 5 years. Office of Health and Environmental Assessment (Health, Environmental, Occupational)

- AQUIRE, Chemical Information System (on-line data base) (Health, Environmental)

- Agency for Toxic Substance and Disease Registry (ATSDR) toxicological profiles. Profiles are produced for chemicals likely to be found at Superfund sites. (Health, Environmental, Occupational, Regulatory)

- Chemical Emergency Preparedness Program (CEPP), Interim Guidance, EPA Chemical Profiles, 1985 (under revision) (Health, Safety, Occupational, Regulatory)

- CHEMTRACK - Testing Priority Committee Data Base, National Toxicology Program (NTP), Res. Tri. Park, NC, or NTP Fourth Annual Report on Carcinogens, 1985. (Health)

- Chemical Hazard Information Profiles (CHIP), used for TSCA chemical assessment, 20-40 page narrative reports on health and env. effects; TSCA Assistance Office (Health, Environmental, Regulatory)

- Chemical Hazards Response Information System (CHRIS), produced by U.S. Coast Guard for use in spill situations. Chemical Information System (on-line data base) (Health, Safety)

- Drinking Water Criteria Documents (DWCD), Used for Safe Water Drinking Act sec 1412 and 1414; Office of Health and Environmental Assessment (Health, Environmental, Regulatory)

- ENVIROFATE, Chemical Information System (on-line data base) (Health, Environmental)

- Exposure Assessments (EA), Site-specific human exposure assessments; Office of Health and Environmental Assessment (Health)

- Federal-State Toxicology and Regulatory Alliance Committee (FSTRAC), Summary of State and Federal Drinking Water Standards and Guidelines, March, 1988. (Regulatory)

- For Your Information (FYI) submission reporting risk; short summaries for chemicals not under TSCA (OTS Public Reading Room or TSCA Assistance Office) (Health, Environmental, Occupational)

15. GENETOX, Chemical Information System (on-line data base) (Health)

16. Health Assessment Documents (HAD), Comprehensive assessments of known health data from all exposure routes. Used by Office of Air Quality Planning and Stds (Health, Environmental, Occupational)

17. Health Effects Assessments (HEA); Primarily air documents, contain health data for listing in CAA Sec 111 or 112; Office of Health and Environmental Assessment (Health, Environmental, Safety, Regulatory)

18. Health and Environmental Effects Documents (HEED); Summaries of health hazard literature for use by OSWER; Office of Health & Environmental Assessment (Health, Environmental, Safety, Regulatory)

19. Health and Environmental Effects Profiles (HEEP); Summaries of health hazard literature for OSW use in RCRA Sec 3001; Office of Health & Environmental Assessment (Health, Environmental, Safety, Regulatory)

20. Hazardous Substances Databank, National Library of Medicine TOXNET (on-line data base) (Health, Environmental, Safety, Occupational, Regulatory) HSDB Reference Number:

21. International Agency for Research on Cancer (IARC) Monographs; can be accessed through RTECS on-line data base. (Health, Environmental, Occupational, Regulatory)

22. EPA's Integrated Risk Information System(IRIS); Toxicity, carcinogenicity, drinking water and risk management data (Env. Criteria and Assess. Office, Cinncinnati, OH) (Health, Safety,

23. Information System for Hazardous Organics in Water (ISHOW), Data on chemical properties. Chemical Information System (on-line data base). (Health, Environmental)

24. Log P Database (Available through Pomona College and Technical Database Service Inc. 1983, 1985) (Health)

25. National Air Toxics Information Clearinghouse (NATICH); air toxics information collected from Federal, State, and local agencies (on-line data base) (Environmental, Safety, Occupational, Regulatory)

26. National Institute for Occupational Safety and Health (NIOSH) Current Intelligence Bulletins (Health)

27. National Institute for Occupational Safety and Health (NIOSH) Criteria Documents for NIOSH Recommendations for Occupational Health Standards (NTIS) (Health, Safety, Occupational, Regulatory)

28. Office of Drinking Water Health Advisory Program document; technical guidance to assist health officials. (Health, Environmental, Occupational, Regulatory)

. Oil and Hazardous Materials - Technical Assistance Data System (OHM-TADS), produced by EPA to aid spill-response teams. CIS (on-line data base) (Health, Environmental, Safety, Occupational, Regulatory)

. Clement Associates, Inc. 1985. Chemical, Physical, and Biological Properties of Compounds Present at Hazardous Waste Sites. Prepared for OWPE, not updated. (Health, Environmental, Regulatory)

. Registration Standard Document. Summarizes EPA's regulatory position based on potential hazards of a pesticide registered under the authority of FIFRA section 3(c)(2)(B). (Health, Environmental,

. Risk Assessments(RA):Carcinogenicity(CA), Mutagenicity(MA), Teratogenicity(TA), Reproductive Effects(ReproAssess), Office of Health and Environmental Assessment (Health, Safety)

. Reportable Quantities for Carcinogens in Hazardous Waste (RQCAR), brief data summaries for CERCLA Sec 101 and 102, Office of Health and Environmental Assessment (Health)

. Reportable Quantities for Chronically Hazardous Substances (RQTOX), prepared under CERCLA Sec 101 and 102, Office of Health and Environmental Assessment (Health, Environmental, Regulatory)

. Registry of Toxic Effects of Chemical Substances (RTECS), NIOSH (on-line data base) (Health, Regulatory)

. Special Review Document. Designed to examine the risks and benefits of the use of a pesticide in accordance with 40 CFR 154, and determine and implement any EPA action. (Health, Environmental, Regulatory)

. ENVIROFATE from Syracuse Research Corporation (SRC) (on-line data base) (Health, Environmental)

. Storage and Retrieval (STORET) system for water quality data. Maintained by EPA. (on-line data base). (Environmental, Occupational)

. Toxicity One-Liners; Short summaries of toxicity studies, with information on reliability of the studies (Office of Pesticides Programs) (Health, Environmental)

. Toxic Substances Control Act Section 8(e). Notices of substantial risk submitted by private sources. (OTS Public Reading Room or TSCA Assistance Office) (Health, Environmental, Safety, Occupational,

. Ambient Water Quality Criteria Documents (WQCD) For implementation of Sec 304 of Federal Water Pollution Control Act; Office of Health & Environmental Assessment (Health, Environmental, Occupational)

Water Information Sources

. Arizona Drinking Water Std./Guidelines (current and future) (FSTRAC)

. California Drinking Water Std./Guidelines (current and future) (FSTRAC)

. Connecticut Drinking Water Std./Guidelines (current and future) (FSTRAC)

. USEPA Drinking Water Std./Guidelines (current and future) (FSTRAC)

. Florida Drinking Water Std./Guidelines (current and future) (FSTRAC)

. Illinois Drinking Water Standards and Guidelines (current and future) (FSTRAC)

. Kansas Drinking Water Standards and Guidelines (current and future) (FSTRAC)

3. Massachusetts Drinking Water Std./Guidelines (current and future) (FSTRAC)

). Maryland Drinking Water Std./Guidelines (current and future) (FSTRAC)

). Maine Drinking Water Standards and Guidelines (current and future) (FSTRAC)

1. Minnesota Drinking Water Std./Guidelines (current and future) (FSTRAC)

2. New Hampshire Drinking Water Std./Guidelines (current and future) (FSTRAC)

3. New Jersey Drinking Water Std./Guidelines (current and future) (FSTRAC)

4. New Mexico Drinking Water Std./Guidelines (current and future) (FSTRAC)

5. New York Drinking Water Std./Guidelines (current and future) (FSTRAC)

6. Rhode Island Drinking Water Std./Guidelines (current and future) (FSTRAC)

7. Vermont Drinking Water Std./Guidelines (current and future) (FSTRAC)

8. Washington Drinking Water Std./Guidelines (current and future) (FSTRAC)

9. Wisconsin Drinking Water Std./Guidelines (current and future) (FSTRAC)

20. Current Arizona Drinking Water Std. in micrograms/liter=
21. Current Connecticut Drinking Water Std. in micrograms/liter=
22. Current USEPA Drinking Water Std. in micrograms/liter=
23. Current Florida Drinking Water Standard in micrograms/liter=
24. Current Illinois Drinking Water Standard in micrograms/liter=
25. Current Massachusetts Drinking Water Std. in micrograms/liter=
26. Current New Jersey Drinking Water Std. in micrograms/liter=
27. Current New Mexico Drinking Water Std. in micrograms/liter=
28. Water monitoring information -- Alaska (STORET)
29. Water monitoring information -- Alabama (STORET)
30. Water monitoring information -- Arkansas (STORET)
31. Water monitoring information -- Arizona (STORET)
32. Water monitoring information -- California (STORET)
33. Water monitoring information -- Colorado (STORET)
34. Water monitoring information -- Connecticut (STORET)
35. Water monitoring information -- Dist. of Columbia (STORET)
36. Water monitoring information -- Delaware (STORET)
37. Water monitoring information -- Florida (STORET)
38. Water monitoring information -- Georgia (STORET)
39. Water monitoring information -- Hawaii (STORET)
40. Water monitoring information -- Iowa (STORET)
41. Water monitoring information -- Idaho (STORET)
42. Water monitoring information -- Illinois (STORET)
43. Water monitoring information -- Indiana (STORET)
44. Water monitoring information -- Kansas (STORET)
45. Water monitoring information -- Kentucky (STORET)

. Water monitoring information -- Louisiana (STORET)

. Water monitoring information -- Massachusetts (STORET)

. Water monitoring information -- Maryland (STORET)

. Water monitoring information -- Maine (STORET)

. Water monitoring information -- Michigan (STORET)

. Water monitoring information -- Minnesota (STORET)

. Water monitoring information -- Missouri (STORET)

. Water monitoring information -- Mississippi (STORET)

. Water monitoring information -- Montana (STORET)

. Water monitoring information -- North Carolina (STORET)

. Water monitoring information -- North Dakota (STORET)

. Water monitoring information -- Nebraska (STORET)

. Water monitoring information -- New Hampshire (STORET)

. Water monitoring information -- New Jersey (STORET)

. Water monitoring information -- New Mexico (STORET)

. Water monitoring information -- Nevada (STORET)

. Water monitoring information -- New York (STORET)

. Water monitoring information -- Ohio (STORET)

. Water monitoring information -- Oklahoma (STORET)

. Water monitoring information -- Oregon (STORET)

. Water monitoring information -- Pennsylvania (STORET)

. Water monitoring information -- Rhode Island (STORET)

. Water monitoring information -- South Carolina (STORET)

. Water monitoring information -- South Dakota (STORET)

. Water monitoring information -- Tennessee (STORET)

. Water monitoring information -- Texas (STORET)

72. Water monitoring information -- Utah (STORET)

73. Water monitoring information -- Virginia (STORET)

74. Water monitoring information -- Vermont (STORET)

75. Water monitoring information -- Washington (STORET)

76. Water monitoring information -- Wisconsin (STORET)

77. Water monitoring information -- West Virginia (STORET)

78. Water monitoring information -- Wyoming (STORET)

Air Information Sources

. Ambient air monitoring information -- Alabama (NATICH)

. Ambient air monitoring information -- Arkansas (NATICH)

. Ambient air monitoring information -- Arizona (NATICH)

. Ambient air monitoring information -- California (NATICH)

. Ambient air monitoring information -- Connecticut (NATICH)

. Ambient air monitoring information -- Delaware (NATICH)

. Ambient air monitoring information -- Illinois (NATICH)

. Ambient air monitoring information -- Indiana (NATICH)

. Ambient air monitoring information -- Kansas (NATICH)

. Ambient air monitoring information -- Louisiana (NATICH)

. Ambient air monitoring information -- Massachusetts (NATICH)

. Ambient air monitoring information -- Maryland (NATICH)

. Ambient air monitoring information -- Michigan (NATICH)

. Ambient air monitoring information -- Minnesota (NATICH)

. Ambient air monitoring information -- Missouri (NATICH)

. Ambient air monitoring information -- Montana (NATICH)

. Ambient air monitoring information -- New Hampshire (NATICH)

. Ambient air monitoring information -- New Jersey (NATICH)

. Ambient air monitoring information -- Nevada (NATICH)

. Ambient air monitoring information -- Ohio (NATICH)

. Ambient air monitoring information -- Pennsylvania (NATICH)

. Ambient air monitoring information -- Rhode Island (NATICH)

. Ambient air monitoring information -- South Carolina (NATICH)

. Ambient air monitoring information -- Tennessee (NATICH)

. Ambient air monitoring information -- Texas (NATICH)

26. Ambient air monitoring information -- Washington (NATICH)

27. Ambient air monitoring information -- Wisconsin (NATICH)

28. Ambient air monitoring information -- Wyoming (NATICH)

29. Ambient air standard or acceptable concentration -- Arizona (NATICH)

30. Ambient air standard or acceptable concentration -- Colorado (NATICH)

31. Ambient air standard or acceptable concentration -- Connecticut (NATICH)

32. Ambient air standard or acceptable concentration -- Florida (NATICH)

33. Ambient air standard or acceptable concentration -- Indiana (NATICH)

34. Ambient air standard or acceptable concentration -- Kansas (NATICH)

35. Ambient air standard or acceptable concentration -- Kentucky (NATICH)

36. Ambient air standard or acceptable concentration -- Massachusetts (NATICH)

37. Ambient air standard or acceptable concentration -- Maryland (NATICH)

38. Ambient air standard or acceptable concentration -- Michigan (NATICH)

39. Ambient air standard or acceptable concentration -- Montana (NATICH)

40. Ambient air standard or acceptable concentration -- North Carolina (NATICH)

41. Ambient air standard or acceptable concentration -- North Dakota (NATICH)

42. Ambient air standard or acceptable concentration -- Nevada (NATICH)

43. Ambient air standard or acceptable concentration -- New York (NATICH)

44. Ambient air standard or acceptable concentration -- Pennsylvania (NATICH)

45. Ambient air standard or acceptable concentration -- Rhode Island (NATICH)

46. Ambient air standard or acceptable concentration -- South Carolina (NATICH)

47. Ambient air standard or acceptable concentration -- South Dakota (NATICH)

. Ambient air standard or acceptable concentration -- Texas (NATICH)

. Ambient air standard or acceptable concentration -- Virginia (NATICH)

. Ambient air standard or acceptable concentration -- Washington (NATICH)

. Ambient air standard or acceptable concentration -- Wyoming (NATICH)

. Air toxics emission inventory information -- Arizona (NATICH)

. Air toxics emission inventory information -- California (NATICH)

. Air toxics emission inventory information -- Idaho (NATICH)

. Air toxics emission inventory information -- Indiana (NATICH)

. Air toxics emission inventory information -- Kansas (NATICH)

. Air toxics emission inventory information -- Massachusetts (NATICH)

. Air toxics emission inventory information -- Minnesota (NATICH)

. Air toxics emission inventory information -- Missouri (NATICH)

. Air toxics emission inventory information -- New Jersey (NATICH)

. Air toxics emission inventory information -- Nevada (NATICH)

. Air toxics emission inventory information -- Oklahoma (NATICH)

. Air toxics emission inventory information -- Pennsylvania (NATICH)

. Air toxics emission inventory information -- Rhode Island (NATICH)

. Air toxics emission inventory information -- South Dakota (NATICH)

. Air toxics emission inventory information -- Tennessee (NATICH)

. Air toxics emission inventory information -- Washington (NATICH)

. Air toxics emission inventory information -- Wisconsin (NATICH)

. Permitting information -- California (NATICH)

. Permitting information -- Georgia (NATICH)

. Permitting information -- Iowa (NATICH)

. Permitting information -- Washington (NATICH)

73. Permitting information -- Wyoming (NATICH)
74. Pollutant research -- California (NATICH)
75. Pollutant research -- Connecticut (NATICH)
76. Pollutant research -- Iowa (NATICH)
77. Pollutant research -- Indiana (NATICH)
78. Pollutant research -- Louisiana (NATICH)
79. Pollutant research -- Massachusetts (NATICH)
80. Pollutant research -- Minnesota (NATICH)
81. Pollutant research -- North Carolina (NATICH)
82. Pollutant research -- Nevada (NATICH)
83. Pollutant research -- Ohio (NATICH)
84. Pollutant research -- Rhode Island (NATICH)
85. Pollutant research -- Texas (NATICH)
86. Source testing information -- California (NATICH)
87. Source testing information -- Minnesota (NATICH)
88. Source testing information -- New Jersey (NATICH)
89. Source testing information -- Nevada (NATICH)
90. Source testing information -- Tennessee (NATICH)
91. Source testing information -- Washington (NATICH)
92. EPA risk analysis information (NATICH)

Appendix C
Field Names and Descriptions

Field Name	Description	Possible Entries and Meanings
CASNUM	Chemical Abstracts Service Registry Number	CAS number without hyphens
NAME	Chemical name as listed in Section 313	Name of chemical
NAMEINDEX	Index field for alphabetizing the data base	Chemical name without prefixes and spaces
UPDATE	Date of most recent update	Date in the form mo/da/yr
NCAR	Number of carcinogenicity entries	Number
NHEL	Number of health and environmental effects entries	Number
NFED	Number of Federal regulation entries	Number
NIFO	Number of general information source entries	Number
NWAT	Number of water information entries	Number
NAIR	Number of air information entries	Number
HAD	Hazard Assessment Documents	X or blank
HEA	Health Effects Assessments	X or blank
HEEPS	Health and Environmental Effects Profiles	X or blank
HEEDS	Health and Environmental Effects Documents	X or blank
PCLEM	Documents on properties of compounds at waste sites	X or blank
ODWHAP	Office of Drinking Water Health Advisory Program documents	X or blank
CEPP	EPA Chemical Profiles for Extremely Hazardous Substances	X or blank
HSDB	Hazardous Substances Data Bank, National Library of Medicine	HSDB reference number or blank
CHIP	Chemical Hazard Information Profiles	X or blank
AQCD	Air Quality Criteria Document	X or blank

Appendix C
Field Names and Descriptions

Field Name	Description	Possible Entries and Meanings
WQCD	Ambient Water Quality Criteria Documents	X or blank
DWCD	Drinking Water Criteria Documents	X or blank
RISKASSESS	Risk Assessments	X or blank
EXPASSESS	Exposure Assessments	X or blank
RQCAR	Reportable Quantities for Carcinogens in Hazardous Waste	X or blank
RQTOX	Reportable Quantities for Chronically Hazardous Substances	X or blank
NIOSHCRIT	NIOSH Criteria Documents	X or blank
NIOSHCIB	NIOSH Current Intelligence Bulletins	X or blank
IARC	International Agency for Research on Cancer Monographs	X or blank
CHEMTRACK	Testing Priority Committee Data Base	X or blank
GENE	GENETOX on-line data base, CIS	X or blank
RTECS	Registry of Toxic Effects of Chemical Substances	X or blank
AQUIRE	AQUIRE on-line data base, CIS	X or blank
ENVIRO	ENVIROFATE on-line data base, CIS	X or blank
SRCENVIRO	Syracuse Research Corporation's new ENVIROFATE data base	X or blank
LOGP	log P data base, Pomona College	X or blank
FYI	For Your Information submission under TSCA	X or blank
ACGIH	ACGIH Threshold Limit Values and Biological Indices document	X or blank
ACGIHTLV	ACGIH Threshold Limit Value-Time-Weighted Average (TLV-TWA)	Value and units (mg/m3 or ppm) of the ACGIH TLV-TWA

Appendix C
Field Names and Descriptions

Field Name	Description	Possible Entries and Meanings
IRIS	Integrated Risk Information System, EPA	X or blank
TOX1LINER	Toxicity One-Liners, Office of Pesticide Programs	X or blank
CHRIS	Chemical Hazards Response Information System, on-line, CIS	X or blank
OHMTADS	Oil and Hazardous Materials-Technical Assistance Data System	X or blank
ISHOW	Information System for Hazardous Organics in Water, CIS	X or blank
NATICH	National Air Toxics Information Clearinghouse	X or blank
FSTRAC	Federal-State Toxicology and Regulatory Alliance Committee	X or blank
STORET	Storage and Retrieval System for water quality data	X or blank
ATSDR	Agency for Toxic Substances and Disease Registry Profiles	X or blank
REGSTAND	Registration Standard for pesticides	X or blank
SPECREV	Action taken on Special Review for pesticides	X or blank
CERCLA	Comp. Environmental Response, Compensation, & Liability Act	X or blank
RQ	CERCLA Reportable Quantity (pounds)	Value in pounds of the CERCLA RQ
SARA302	Superfund Amendments and Reauthorization Act, Section 302	X or blank
TPQ	SARA Section 302 Threshold Planning Quantity (pounds)	Value in pounds of the TPQ
DWSTD	Drinking water standards - Max. Contaminant Levels (MCL)	Value and units of the MCL
NEWSTD	New drinking water standard (MCL) planned in the future	X or blank

Appendix C
Field Names and Descriptions

Field Name	Description	Possible Entries and Meanings
PROMCL	Proposed Maximum Contaminant Level	Proposed MCL value and units
DWSTDMAT	Drinking water standard field for use with Federal Matrix	MCL and units, with notation (P) if new MCL is planned
DWGOAL	Drinking Water Maximum Contaminant Level Goal (MCLG)	Value and units for MCLG
PROMCLG	Proposed Maximum Contaminant Level Goal	Proposed MCLG value and units
DWGOALMAT	Drinking water MCLG field for use with Federal matrix	MCLG values and units, with notation if new MCLG is planned
OSHAZ	OSHA General Industry Standards, Subpart Z	X or blank
OSHAPEL	OSHA Permissible Exposure Limit (PEL), 8-hr. TWA	Value and units (mg/m3 or ppm) of the OSHA PEL
CWA311	Clean Water Act Section 311	X or blank
CWA307	Clean Water Act Section 307	X or blank
CAA111	Clean Air Act Section 111, Natl. Emission Std., 40CFR360	X or blank
CAA112	Clean Air Act Section 112, Natl. Emmission Std., 40FR61	X or blank
CAADEVELOP	Federal regulations under development or planned under CAA	X or blank
CAAASSESS	Assessment underway for possible regulation under CAA	X or blank
CAANOREG	Decision not to regulate under CAA	X or blank
RCRA	Resource Conservation and Recovery Act, hazardous wastes	X or blank
APP9	RCRA Appendix IX - Ground-Water Monitoring List	X or blank
TOXCHAR	RCRA Toxicity Characteristic - concentration (40CFR261.24)	Value of the Toxicity Characteristic concentration in mg/L

Appendix C
Field Names and Descriptions

Field Name	Description	Possible Entries and Meanings
TOXCHARPRO	Toxicity Characteristic proposed 51FR21648 (6/13/86)	Value of the Toxicity Characteristic concentration in mg/L
TOXCHARMAT	Field for use with the Federal Matrix	Tox. Char. conc. from both 40CFR261.24 and 51FR2168 (P)
TSCA	Toxic Substances Control Act - Chemical Substance Inventory	X or blank
TSCA8E	TSCA Section 8(e) - Notices of substantial risk	X or blank
TOXPOL	Toxic Pollutant under Clean Water Act Section 307	X or blank
DOT	Department of Transportation Hazardous Materials Table	X or blank
PESTICIDE	Pesticide regulated under FIFRA	X or blank
SARA110	SARA Section 110, priority chemicals at waste sites	X or blank
NTPTEST	National Testing Program bioassay results	P = Positive response in at least one animal species Blank = No positive response or not tested
NTPCLASS	National Testing Program classification	CK = Known carcinogen CS = Suspect carcinogen Blank = Not NTP-classified carcinogen or not tested
IARCRATE	IARC Carcinogenicity Classification	AP = Animal, positive AS = Animal, suspected HP = Human, positive HS = Human, suspected HA = Human, suspected and animal, positive

Appendix C
Field Names and Descriptions

Field Name	Description	Possible Entries and Meanings
		1 = Human carcinogen, based on human evidence 2A = Probable human carcinogen, based on human evidence 2B = Probable human carcinogen, based on animal evidence 3 = Limited evidence of carcinogenicity in animals Blank = Lower classification or not tested
EPACARC	EPA Carcinogenicity Classification	A = Human carcinogen, sufficient epidemiological evidence B1 = Probable human carcinogen, limited evidence in humans B2 = Probable human carcinogen, sufficient animal evidence C = Possible human carcinogen, limited animal evidence Blank = Lower classification or not tested
GTOX	Gene-tox carcinogen evaluation results	SP = Sufficient positive, tumor induction shown LP = Limited positive, indication of tumor induction Blank = Lower rating or not tested
HERITSRC	Heritable genetic and chromosomal mutations in humans	Reference acronym preceded by "H" indicates effect, based on ref. Blank = Positive results not reported or no information
DEVELSRC	Developmental toxicity	Reference acronym preceded by "D" indicates effect, based on ref. Blank=Developmental toxicity not reported or no information

Appendix C
Field Names and Descriptions

Field Name	Description	Possible Entries and Meanings
REPROSRC	Reproductive toxicity	Reference acronym preceded by "R" indicates effect, based on ref. Blank=Reproductive toxicity not reported or no information
ACUTESRC	Acute toxicity, LC50<=5mg/L,LD50<=250mg/kg(oral),500(dermal)	Reference acronym preceded by "A" indicates effect, based on ref. Blank=Not reported to be acutely toxic or no information
CHRONICSRC	Chronic toxicity from doses <=1g/kg/day for >90 days	Reference acronym preceded by "C" indicates effect, based on ref. Blank=Chronic toxicity not reported or no information
NEUROSRC	Neurotoxicity from doses <=1g/kg/day for <=90 days	Reference acronym preceded by "N" indicates effect, based on ref. Blank=Neurotoxicity not reported or no information
PERSISTSRC	Persistence in the environment reported	Reference acronym preceded by "P" indicates effect, based on ref. Blank = Persistence not reported or no information
ENVIRO1REF	Aquatic toxicity:LC50<=10ppm, or <=100 ppm and half-life>=4d	Reference acronym preceded by "1" indicates effect, based on ref. AQ1=Aquatic toxicity based on reliable study, from AQUIRE AQ2=Aquatic toxicity based on satisfactory study, AQUIRE AQ3=Aquatic toxicity based on unreliable study, AQUIRE AQ4=Aquatic tox based on abstract or foreign summary, AQUIRE

Appendix C
Field Names and Descriptions

Field Name	Description	Possible Entries and Meanings
		Blank=Aquatic tox at this level not reported or no information
ENVIRO2REF	Aquatic toxicity - LC50<=100 ppm and bioconcentration	Reference acronym preceded by "2" indicates effect, based on ref.
		AQ5=Aquatic toxicity based on reliable study, from AQUIRE
		AQ6=Aquatic toxicity based on satisfactory study, AQUIRE
		AQ7=Aquatic toxicity based on unreliable study, AQUIRE
		AQ8=Aquatic tox based on abstract or foreign summary, AQUIRE
BIOACREF	Bioaccumulation in the environment	Reference acronym preceded by "B" indicates effect, based on ref.
		Blank=Bioaccumulation not reported or no information

Appendix C
References for Health Effects

Reference Acronym for Health Effects	Reference for Health Effects
HAD	Health Assessment Documents, EPA
HEA	Health Effects Assessments, EPA
HEEP	Health and Environmental Effects Profiles, EPA
HEED	Health and Environmental Effects Documents, EPA
HSDB	Hazardous Substances Databank, National Library of Medicine TOXNET
WQCD	Ambient Water Quality Criteria Documents, EPA
DWCD	Drinking Water Criteria Documents (DWCD), EPA
GENE	GENETOX, Chemical Information System (on-line data base)
RTEC	Registry of Toxic Effects of Chemical Substances, NIOSH (on-line data base)
AQUIRE	AQUIRE, Chemical Information System (on-line data base)
EV	ENVIROFATE, Chemical Information System (on-line data base)
LOGP	Log P Database (Pomona College and Technical Database Service Inc.)
ATSD	Agency for Toxic Substances and Disease Registry (ATSDR) toxicological profile

APPENDIX D: DESCRIPTIONS OF "LOOKUP" FIELD CODES

As explained in the text, the field name LOOKUP in the SORCE313.DBF is used to identify the type of lookup format used for the information source. It is filled with 1 of 4 codes: "X", "E", "P", or "C".

Code 1 - "X" If an "X" is placed in the LOOKUP field the Roadmaps system does the following to load the correct information source:

1). Roadmaps takes the value in the field name FIELDS and locates that field name in the SARA313.DBF.
2). If an "X" appears as a value in that field name, the Roadmaps system knows that an information source exists for this chemical.
3). Roadmaps will take the value in the field name DATABASE and locate in that database a CODE that equals the field name FIELDS.
4). Roadmaps will then load the value in the field DESC for this information source into memory.

Code 2 - "E" If an "E" is placed in the LOOKUP field the Roadmaps system does the following to load the correct information source:

1). Roadmaps takes the value in the field name FIELDS and locates that field name in the SARA313.DBF.
2). The value in that field name will be used as an input to the information source.
3). Roadmaps will take the value in the field name DATABASE and locate in that database a CODE that equals the field name FIELDS.
4). Roadmaps will then take the value in the DESC field and add the input value to the information source description.
5). Roadmaps will the load that description into memory.

Code 3 - "P" If a "P" is place in the LOOKUP field the Roadmaps system does the following to load the correct information source:

1). Roadmaps takes the value in the field name FIELDS and locates that field name in the SARA313.DBF.
2). The value in that field will be used as an input to the information source with the addition of the text string "(pounds)".
3). Roadmaps will take the value in the field name DATABASE and locate in that database a CODE that equals the field name FIELDS.
4). Roadmaps will then take the value in the DESC field and add the input value + (pounds) to the information source description.
5). Roadmaps will then load that description into memory.

Code 4 - "C" If a "C" is placed in the LOOKUP field the Roadmaps system does the following to load the correct information source:

1). Roadmaps takes the value in the field name FIELDS and locates that field name in the SARA313.DBF.
2). If the value for that field name is not empty, Roadmaps knows that an information source exists for that chemical and that this value (VAL) will be used to locate the information source.
3). Roadmaps will take the value in the field name DATABASE and locate in that database a CODE that equals the value (VAL).
4). Roadmaps will then load the value in the DESC field for this information source into memory.

APPENDIX E: STORET PARAMETER CODES

Parameter codes are used in the STORET on-line database to identify variables for specific types of water monitoring for chemical substances. STORET searches can not be performed without specifying the proper parameter code. Listed below in alphabetical order are all STORET parameter codes that apply for SARA Section 313 chemicals. Note that many chemicals have more than one parameter code, because the presence of the chemical may be monitored in more than one way.

REQUESTED PARAMETERS:

PARAMETER CODES AND ABBREVIATIONS

34214	ACROLEIN	TISMG/KG	WET WGT
34219	ACRYLNIT	TISMG/KG	WET WGT
39333	ALDRIN	SEDUG/KG	DRY WGT
81713	ALDRIN	SHEL DRY	WGTUG/KG
46557	ALUMINU	M,AL.DIS	S+ UG/L
01106	ALUMINUM	AL,DISS	UG/L
81213	AMMONIA	ILLINOIS	MG/L
34220	ANTHRACE	NE	TOTMUG/L
01095	ANTIMONY	SB,DISS	UG/L
01004	ARSENIC	TISMG/KG	WET WGT
00995	AS-INORG	AS,DISS	UG/L
01003	ARSENIC	SEDMG/KG	DRY WGT
01005	BARIUM	BA,DISS	UG/L
34030	BENZENE		TOT UG/L
34237	BENZENE	SEDUG/KG	DRY WGT
39120	BENZIDIN		TOTUG/L
01010	BERYLIUM	BE,DISS	UG/L
34277	B2CETETR	TISMG/KG	WET WGT
34272	BCLMTETR	TISMG/KG	WET WGT
32104	BROMOFRM	WHL-WTR	UG/L
81562	BUTANAL		TOT UG/L
81772	CADMIUM	AQ MCDRY	WGTMG/KG
01026	CADMIUM	CD,SUSP	UG/L
01028	CD MUD	DRY WGT	MG/KG-CD
32260	CTE		MG/L
81714	CHLDANE	SHEL DRY	WGTUG/KG
34682	CDANEMET	TECH&MET	TISMG/KG
50060	CHLORINE	TOT RESD	MG/L
50059	CHLORINE		LB/DAY
00580	CL2DMND	24 HR	MG/L

34213	ACROLEIN	SEDUG/KG	DRY WGT
34218	ACRYLNIT	SEDUG/KG	DRY WGT
39331	ALDRIN		DIS UG/L
39332	ALDRIN	SUS FRAC	UG/L
01105	ALUMINUM	AL,TOT	UG/L
01108	AL MUD	DRY WGT	MG/KG-AL
34224	ANTHRACE	TISMG/KG	WET WGT
01099	ANTIMONY	TIS-WET	MG/KG
01098	ANTIMONY	SEDMG/KG	DRY WGT
01000	ARSENIC	AS,DISS	UG/L
00997	AS-INORG	AS,TOT	UG/L
01006	BARIUM	BA,SUSP	UG/L
01008	BA MUD	DRY WGT	MG/KG-BA
34238	BENZENE	TISMG/KG	WET WGT
34241	BENZIDIN	TISMG/KG	WET WGT
01012	BERYLIUM	BE,TOT	UG/L
01013	BERYLIUM	SEDMG/KG	DRY WGT
34276	B2CETETR	SEDUG/KG	DRY WGT
34271	BCLMTETR	SEDUG/KG	DRY WGT
34291	BROMOFOR	TISMG/KG	WET WGT
81744	CADMIUM	SHELL	WETMG/KG
81214	CD-COLD	ILLINOIS	MG/L
01027	CADMIUM	CD,TOT	UG/L
71940	CADMIUM	TISMG/KG	WET WGT
34300	CARBNTET	TISMG/KG	WET WGT
39352	CHLRDANE	TECH&MET	DIS UG/L
39350	CHLRDANE	TECH&MET	TOT UG/L
50064	CHLORINE	FREE AVL	MG/L
50056	CHLORINE	DOSE	MG/L
00385	CL2DMND	15 MIN	MG/L

34210	ACROLEIN		TOTMUG/L
34215	ACRYLONI	TRILE	TOTMUG/L
34680	ALDRIN	TISMG/KG	WET WGT
39330	ALDRIN		TOT UG/L
01107	ALUMINUM	AL,SUSP	UG/L
00619	UN-IONZD	NH3-NH3	MG/L
34223	ANTHRACE	SEDUG/KG	DRY WGT
01096	ANTIMONY	SB,SUSP	UG/L
01097	ANTIMONY	SB,TOT	UG/L
46551	ARSENIC	ACID/FLT	(AS)UG/L
01001	ARSENIC	AS,SUSP	UG/L
46558	BARIUM,	BA. DISS	.+ UG/L
01007	BARIUM	BA,TOT	UG/L
34235	BENZENE		DISSUG/L
39121	BENZIDIN	SEDUG/KG	DRY WGT
01011	BERYLIUM	BE,SUSP	UG/L
34252	BERYLIUM	TISMG/KG	WET WGT
34273	BIS2CHLO	ROETHYLE	TOTMUG/L
34268	BISCHLOR	OMETHYLE	TOTMUG/L
34290	BROMOFOR	SEDUG/KG	DRY WGT
81634	CD SHELL	DRY WGT	MG/KG
01025	CADMIUM	CD,DISS	UG/L
46559	CADMIUM	,CD.DISS	.+ UG/L
32102	CARBNTET		TOTUG/L
34299	CARBNTET	SEDUG/KG	DRY WGT
39353	CHLRDANE	TECH&MET	SUS UG/L
39351	CDANEDRY	TECH&MET	MUDUG/KG
50066	CHLORINE	COMB AVL	MG/L
00369	CL2DMND	30 MIN	MG/L
00370	CL2DMND	1 HR	MG/L

34305	CLBENZEN	TISMG/KG	WET WGT
39460	CLRBNZLT	WHL SMPL	UG/L
34314	CLETHANE	SEDUG/KG	DRY WGT
32270	CHLORO-	FORM EXT	MG/L
34316	CHLOROFO	RM	DISSUG/L
01032	CHROMIUM	HEX-VAL	UG/L
81772	CADMIUM	AQ MCDRY	WGTMG/KG
01031	CHROMIUM	CR,SUSP	UG/L
46560	CHROMIU	M,CR.DIS	S.+UG/L
01024	CR MUD	WET WGTM	G/KG-CR
01036	COBALT	CD,SUSP	UG/L
01038	CO MUD	DRY WGT	MG/KG-CO
81746	COPPER	SHELL	WETMG/KG
81774	COPPER	AQ MCDRY	WGTMG/KG
01039	CU MUD	WET WGTM	G/KG-CU
71937	COPPER	TISMG/KG	WET WGT
00722	CYANIDE	FREE CN	MG/L
81524	DICHLORO	BENZENE	TOT UG/L
34340	DETHPHTH	TISMG/KG	WET WGT
34338	DIETHYLP	HTHALATE	SUSPUG/L
34344	DMETPHTH	SEDUG/KG	DRY WGT
34374	ETHYLBEN	SEDUG/KG	DRY WGT
34687	HEPTCHLR	TISMG/KG	WET WGT
81719	HEPTACHL	SHEL DRY	WGTUG/KG
39700	HCB		TOT UG/L
39702	HEXCLBD		TOT UG/L
34390	HEXCLCPD	TISMG/KG	WET WGT
34400	HEXACLET	TISMG/KG	WET WGT
81748	LEAD	SHELL	WETMG/KG
01052	LEAD	SEDMG/KG	DRY WGT

34304	CLBENZEN	SEDUG/KG	DRY WGT
39461	CLRBNZLT	MUD DRY	UG/KG
34311	CHLOROET	HANE	TOTMUG/L
34319	CHLRFORM	TISMG/KG	WET WGT
81345	CHLPRENE	ISOMER	TOT UG/L
01030	CHROMIUM	CR,DISS	UG/L
81022	CHROMIUM	HEX-VAL	#/DAY
01034	CHROMIUM	CR,TOT	UG/L
71939	CR-FISH	UG/G OR	MG/KG WT
46561	COBALT.	CO. DISS	.+ UG/L
01035	COBALT	CO,DISS	UG/L
01041	COPPER	CU,SUSP	UG/L
81636	CU SHELL	DRY WGT	MG/KG
01042	COPPER	CU,TOT	UG/L
46562	COPPER,	CU. DISS	.+ UG/L
85008	CYANIDE	TOTAL	#/DAY
81210	CYANIDE	ILLINOIS	MG/L
34331	DICLBRMT	TISMG/KG	WET WGT
34339	DETHPHTH	SEDUG/KG	DRY WGT
34337	DIETHYLP	HTHALATE	DISSUG/L
34341	DIMETHYL	PHTHALAT	TOTMUG/L
34371	ETHYLBEN	ZENE	TOTMUG/L
39413	HEPTCHLR	SEDUG/KG	DRY WGT
39412	HEPTCHLR		SUSUG/L
39701	HCB	SEDUG/KG	DRY WGT
39705	HEXCLBD	SEDUG/KG	DRY WGT
34389	HEXCLCPD	SEDUG/KG	DRY WGT
34399	HEXACLET	SEDUG/KG	DRY WGT
81633	PB SHELL	DRY WGT	MG/KG
81778	LEAD	AQ MCDRY	WGTMG/KG

34301	CHLOROBE	NZENE	TOTMUG/L
34315	CLETHANE	TISMG/KG	WET WGT
32106	CHLRFORM		TOTUG/L
34318	CHLRFORM	SEDUG/KG	DRY WGT
81520	CLPRENE		TOT UG/L
81217	CR-TOTAL	ILL-COLD	MG/L
01220	CR-DISS	.HEX VAL	UG/L
85007	CHROMIUM	TOTAL	#/DAY
01029	CHROMIUM	SEDMG/KG	DRY WGT
01037	COBALT	CO,TOTAL	UG/L
81659	CO FISH	WET WGT	MG/KG
01040	COPPER	CU,DISS	UG/L
01043	COPPER	SEDMG/KG	DRY WGT
85009	COPPER	TOTAL	#/DAY
81218	COPPER	ILL-COLD	MG/L
00720	CYANIDE	CN-TOT	MG/L
00721	CYANIDE	SEDMG/KG	DRY WGT
34328	DICHLORO	BROMOMET	DISSUG/L
34336	DIETHYLP	HTHALATE	TOTMUG/L
34345	DMETPHTH	TISMG/KG	WET WGT
34375	ETHYLBEN	TISMG/KG	WET WGT
71880	FORMALDE	HYDE	MG/L
19411	INVALID	PARAMETER	CODE
39410	HEPTCHLR		TOTUG/L
34688	HCB	TISMG/KG	WET WGT
34395	HEXCLBD	TISMG/KG	WET WGT
34386	HEXACHLO	ROCYCLOP	TOTMUG/L
34396	HEXACHLO	ROETHANE	TOTMUG/L
85206	PB MUD	WET WGT	MG/GM-PB
81720	LINDANE	SHEL DRY	WGTUG/KG

APPENDIX E: STORET PARAMETER CODES

39782	LINDANE	WHL SMPL	UG/L
81747	MANGANES	SHELL	WETMG/KG
81776	MANGANES	AQ MCDRY	WGTMG/KG
01055	MANGNESE	MN	UG/L
85013	MERCURY	TOTAL	#/DAY
71890	MERCURY	HG,DISS	UG/L
81770	MERCURY	SHELLWET	WGTMG/KG
71920	MERCURY	SED-PULP	MG/KG WT
39482	METHOXY	CHLOR-FI	SM-UG/KG
81721	MTHCXYCL	SHEL DRY	WGTUG/KG
34445	NAPTHALE	SEDUG/KG	DRY WGT
01066	NICKEL	NI,SUSP	UG/L
81628	NI SHELL	DRY WGT	MG/KG
85010	NICKEL	TOTAL	#/DAY
00695	NTA		MG/L
34447	NITROBEN	ZENE	TOTMUG/L
34594	2NPHENOL	SEDUG/KG	DRY WGT
34649	4NPHENOL	SEDUG/KG	DRY WGT
34441	NITRSOMA	SEDUG/KG	DRY WGT
34436	NITRSOPA	SEDUG/KG	DRY WGT
34428	NITROSOD	IPROPYLA	TOTMUG/L
39542	PARATHN	FIL FRAC	UG/L
39540	PARATHN	WHL SMPL	UG/L
39061	PCP	SEDUG/KG	DRY WGT
34468	PHENOL	TISMG/KG	WET WGT
70505	T PO4	P-COL	MG/L
00672	PHOS-DIS	HYDRO	MG/L P
00669	PHOS-TOT	HYDRO	MG/L P
00677	PHOS-DIS	HYD+ORTH	MG/L P
70509	P-SOL	MUD D WT	MG/KG-P

39783	LINDANE	MUD DRY	UG/KG
81741	MANGANES	FISH WET	WGTMG/KG
01056	MANGNESE	MN,DISS	UG/L
71883	MANGNESE	MN,ELMTL	UG/L
71900	MERCURY	HG,TOTAL	UG/L
81725	HG SLUDG	DRY WGT	MG/L
61500	MERCURY	SLUDGE	SOLMG/KG
71921	MERCURY	SEDMG/KG	DRY WGT
39481	MTHXYCLR	MUD DRY	UG/KG
39480	MTHXYCLR	WHL SMPL	UG/L
34696	NAPTHALE	NE T	OTMUG/L
01065	NICKEL	NI,DISS	UG/L
81777	NICKEL	AQ MCDRY	WGTMG/KG
01068	NICKEL	SEDMG/KG	DRY WGT
34451	NITROBEN	TISMG/KG	WET WGT
34101	NITROGLY	WTR SMPL	MG/L
34591	2NITROPH	ENOL	TOTMUG/L
34646	4NITROPH	ENOL	TOTMUG/L
34438	NITROSOD	IMETHYLA	TOTMUG/L
34433	NITROSOD	IPHENYLA	TOTMUG/L
34432	NITONPRA	TISMG/KG	WET WGT
81810	PARATHIN	FISH WET	WGTMG/KG
39032	PCP		TOT UG/L
34695	PHENOL	SEDUG/KG	DRY WGT
85537	PHOS	MILK	GM/L
70506	SOL PO4-	T P-COL	MG/L
00671	PHOS-DIS	ORTHO	MG/L P
00670	PHOS-TOT	ORGANIC	MG/L P
00678	PHOS-TOT	HYD+ORTH	MG/L P
70510	P-SUSPND	MUD D WT	MG/KG-P

81221	MANGANES	ILL-COLD	MG/L
01053	MN MUD	DRY WGT	MG/KG-MN
01054	MANGNESE	MN,SUSP	UG/L
46565	MANGANE	SE,MN.DI	SS+UG/L
71895	MERCURY	HG,SUSP	UG/L
71933	HG TOTAL	FISH DWT	UG/GM
71935	MERCURY	FISH	PPM-WET
71930	MERCURY	TISMG/KG	WET WGT
81644	MTXCHLOR	FISH WET	WGT UG/G
34446	NAPTHALE	TISMG/KG	WET WGT
34443	NAPHTHAL	ENE	DISSUG/L
81222	NICKEL	ILL-COLD	MG/L
01067	NICKEL	NI,TOTAL	UG/L
01069	NICKEL	TISMG/KG	WET WGT
34450	NITROBEN	SEDUG/KG	DRY WGT
34595	2NPHENOL	TISMG/KG	WET WGT
34650	4NPHENOL	TISMG/KG	WET WGT
34442	NITRSOMA	TISMG/KG	WET WGT
34437	NITRSOPA	TISMG/KG	WET WGT
34431	NITONPRA	SEDUG/KG	DRY WGT
39541	PARATHN	MUD	UG/KG
39543	PARATHN	SUS FRAC	UG/L
39060	PCP	TISMG/KG	WET WGT
34694	PHENOL		TOT UG/L
80106	PHOS. IN	PARTIC.	MG/KG
00666	PHOS-DIS		MG/L P
00667	PHOS-SUS		MG/L P
01070	PHOS-TOT	SPEC	UG/L P
70507	PHOS-T	ORTHO	MG/L P
00668	PHOS MUD	DRY WGT	MG/KG-P

01149	SELENIUM	TISMG/KG	WET WGT
01145	SELENIUM	SE,DISS	UG/L
81742	SILVER	FISH WET	WGTMG/KG
34474	SILVER	TISMG/KG	WET WGT
01077	SILVER	AG,TOT	UG/L
34520	1122TCLE	TISMG/KG	WET WGT
34479	TETCLETE	TISMG/KG	WET WGT
01059	THALLIUM	TL,TOTAL	UG/L
34010	TOLUENE		TOT UG/L
39400	TOXAPHEN		TOTUG/L
39401	TOXAPHEN		DISUG/L
34554	124TCBEN	SEDUG/KG	DRY WGT
34510	111TCLET	TISMG/KG	WET WGT
34515	112TCLET	TISMG/KG	WET WGT
39180	TRICHLOR	ETHYLENE	TOT UG/L
34485	TRICHLOR	OETHYLEN	DISSUG/L
34621	246TRICH	LOROPHEN	TOTMUG/L
01086	VANADIUM	V,SUSP	UG/L
39175	VINYLCHL	ORIDE	TOT UG/L
34493	VINYLCHL	ORIDE	DISSUG/L
81224	ZINC	ILL-COLD	MG/L
01093	ZINC	SEDMG/KG	DRY WGT
85006	ZINC	TOTAL	#/DAY

01147	SELENIUM	SE,TOT	UG/L
01148	SELENIUM	SEDMG/KG	DRY WGT
01078	SILVER	SEDMG/KG	DRY WGT
01075	SILVER	AG,DISS	UG/L
46566	SILVER,	AG. DISS	.+ UG/L
34519	1122TCLE	SEDUG/KG	DRY WGT
34478	TETCLETE	SEDUG/KG	DRY WGT
01058	THALLIUM	TL,SUSP	UG/L
34484	TOLUENE	TISMG/KG	WET WGT
39402	TOXAPHEN		SUSUG/L
39403	TOXAPHEN	SEDUG/KG	DRY WGT
34555	124TCBEN	TISMG/KG	WET WGT
34509	111TCLET	SEDUG/KG	DRY WGT
34514	112TCLET	SEDUG/KG	DRY WGT
34692	TRICLETE	TISMG/KG	WET WGT
34625	246TCPHN	TISMG/KG	WET WGT
81284	TREFLAN	TOT	UG/L
01085	VANADIUM	V,DISS	UG/L
34693	VINYLCHL	TISMG/KG	WET WGT
46567	ZINC	ACID/FLT	(ZN)UG/L
81749	ZINC	SHELL	WETMG/KG
01091	ZINC	ZN,SUSP	UG/L
71938	ZINC	TISMG/KG	WET WGT

01146	SELENIUM	SE,SUSP	UG/L
81635	AG SHELL	DRY WGT	MG/KG
81772	CADMIUM	AQ MCDRY	WGTMG/KG
01076	SILVER	AG,SUSP	UG/L
81223	SILVER	ILL-COLD	MG/L
34516	1122TETR	ACHLOROE	TOTMUG/L
34475	TETRACHL	OROETHYL	TOTMUG/L
01057	THALLIUM	TL,DISS	UG/L
34483	TOLUENE	SEDUG/KG	DRY WGT
31723	INVALID	PARAMETER	CODE
34691	TOXAPHEN	TISMG/KG	WET WGT
34551	124TRICH	LOROBENZ	TOTMUG/L
34506	111TRICH	LOROETHA	TOTMUG/L
34511	112TRICH	LOROETHA	TOTMUG/L
34487	TRICLETE	SEDUG/KG	DRY WGT
34624	246TCPHN	SEDUG/KG	DRY WGT
01087	VANADIUM	V,TOT	UG/L
01088	V MUD	DRY WGT	MG/KG-V
34495	VINYLCHL	SEDUG/KG	DRY WGT
01090	ZINC	ZN,DISS	UG/L
81627	ZN SHELL	DRY WGT	MG/KG
01092	ZINC	ZN,TOT	UG/L
71932	ZN TOTAL	FISH DWT	UG/GM